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A HISTORY OF BABYLONIA AND ASSYRIA

BY

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SIXTH EDITION

IN TWO VOLUMES, REVISED, LARGELY REWRITTEN, AND ILLUSTRATED

VOLUME I

PROLEGOMENA

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TO MY WIFE

"I give this faulty book to you,
For tho' the faults be thick as dust
In vacant chambers, I can trust
Your woman's nature kind and true."

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PREFACE

DURING the last ten years of the past century, when not absorbed in the duties of a busy professorship, I wrote this book. In its interest I made repeated journeys to Europe, and also to the East, and the greater part of the text was written during my summer holidays in the University Library at Leipzig, the British Museum in London, and in the Bodleian Library in Oxford. In the last named I had especial opportunity to investigate the early history of cuneiform research in the almost unrivaled collections of early travelers and decipherers. In the year 1900 the first edition appeared, and with much concern I awaited the judgment of the few scholars whose decision rested upon a real knowledge of this new and difficult field. If I could secure from them an approval in general I could afford to bear their criticism of the special, and need not tremble before the bar of the many who must give a verdict without immediate acquaintance with the cuneiform literature. The friendly reception of the book far exceeded my utmost hopes, and, I fear, went much beyond the book's deserts. In

France and Germany, in England and in America, the men whose opinion I valued most highly united in words of generous approbation, and found surprisingly little fault. I had supposed that Johnson was right in the vigorous declaration that "the great contention of criticism is to find the faults of the moderns and the beauties of the ancients. While an author is yet living we estimate his powers by his worst performance; and when he is dead we rate them by his best," but my experience has been quite the contrary, and the book passed slowly but steadily through five editions, with one or more printings in each. Still more striking was its extensive use by Assyriologists, and by students of the wider Orient, while the great and very useful army who popularize learning, to the world's advantage, gleaned widely from it. Most of those who took from it made ready acknowledgment of the source, and some even graciously and delicately. Some lifted without stint and spared even the comely device of quotation marks, while others paid the fair compliment of turning its suggestions into convictions of their own, and named no other authority but themselves. I grudge them naught, hoping only that as they read these things again in these new pages they may not accuse me of borrowing from them!—for "the reciprocal civility of authors is one of

the most risible scenes in the farce of life."[1] As the years have slipped away and other work claimed my summer holidays, I have wished often that the book might be thoroughly revised, for I knew its limitations better far than any critic, and felt ever a rising courage that I could make it better.

In the month of May, 1913, I received from the kind men who had long commanded my service in an academic chair a year's leave of absence, and in a few weeks I was comfortably established in my dream city of Oxford to essay the long postponed, yet ever tempting task. Mr. Falconer Madan, Bodley's librarian, gave me a private table in the poetically beautiful Selden wing of the Bodleian Library, and my long time friend, Dr. A. E. Cowley, encouraged the ever willing staff to heap it high with books, while he searched out that which might be remote from any eye but such an one as his. There I sat daily for fourteen months during five days in every week, giving every Thursday to work in the British Museum, in the supplementing of Bodley's printed stores with the richer material of the great museum. Saint John's College opened its hospitable doors and made me a grateful member of the family at its bountiful board. The society of scholars was always accessible, their wel-

[1] I borrowed this from Johnson, as anybody might suppose, and gladly give credit for it, as an example to other borrowers.

come never flagging; among whom gratitude would fain honor the now sainted Canon Driver, and with him Doctors Burney, Cowley, Gray, Langdon, Sayce, and the President and Fellows of Saint John's College. Did ever toiling worker live amid conditions so charming?

During this period I made two visits to Paris to see again the newer Sumerian and Babylonian objects of art or letters; and had one brief sojourn in Berlin with my former teacher and constant friend, Professor Delitzsch, who showed me the treasures of his great museum with characteristic open-handedness.

In the weekly visits to London I had many courtesies and never a refusal from the friends of many years in the British Museum, Doctors Budge and King.

So was the book revised; but should I not choose some other word? For it has grown from eight hundred to twelve hundred pages, the whole of the early history of Babylonia and of Assyria is entirely new, and there are few pages elsewhere but have met with some change.

Every part of the two volumes rests upon original sources, yet I have tried to consider all that modern Assyriologists have brought forward in elucidation of them, and have sought to give due credit for every explanation which I have accepted, and to treat with courtesy and respect any that I have ventured

to reject. The work of investigation in Assyriology has fallen necessarily into the hands of specialists, and so vast is the field, so intricate its problems, that there are now specialists in even small parts of the subject. The results of all their detailed research are scattered in scientific journals and monographs in many of the languages of Europe. To sift, weigh, and decide upon their merits is no easy task, and I am sadly conscious that it might have been better done; yet am I persuaded that scholars who know the field intimately will recognize the difficulties and be most ready to pardon the shortcomings which each may discover in his own province. But it must stand or fall as it is. I have done what I could, and such as it is, it is mine own. No other eyes have scanned its pages, and its claim is that an independent investigator wrote it for his colleagues' use, wherever men would study these ancient peoples and their ways. I am well assured that experts will find no small amount of original material in it and everywhere the fruits of independent judgment, kindly and temperately expressed.

Fifteen years ago I expressed the hope that "it may prove sufficiently useful to demand and deserve a revision at no distant day." I should like to be encouraged to revise it again and promise now to do it if its public make the demand. But to-day there is naught

but to send it upon its journey very modestly, and not too hopefully, but very gratefully and good humoredly, having learned from Johnson that as a man "advances in life, he learns to think himself of no consequence and little things of little importance; and so he becomes more patient and better pleased," being well persuaded that "this will ultimately produce the greatest happiness." And now, kind reader, farewell. You have heard the author speaking gaily and very personally; long hours of hard marching in desert places await you as you read his book. May the Muses find you oases elsewhere!

ROBERT W. ROGERS.

MADISON, NEW JERSEY,
May 25, 1915.

A HISTORY

OF

BABYLONIA AND ASSYRIA

BOOK I

PROLEGOMENA

CHAPTER I

EARLY TRAVELERS AND EARLY DECIPHERERS

PRIOR to 1820 the only knowledge possessed by the world of the two cities Babylon and Nineveh, and of the empires which they founded and led, was derived from peoples other than their inhabitants. No single word had come from the deep stillness of the ruins of Babylon, no voice was heard beneath the mounds of Nineveh. It would then have seemed a dream of impossible things to hope that some future day would discover buried libraries in these mounds, filled with books in which these peoples had written not only their history and chronology, but their science, their operations of building, their manners and customs, their very thoughts and emotions. That the long-lost languages in

which these books were written should be recovered, that men should read them as readily and as surely as the tongues of which traditional use had never ceased among men—all this would then have seemed impossible indeed. But this and much more has happened. From these long-lost, even forgotten materials the history of Babylonia and Assyria has become known. These are now the chief sources of our knowledge, and before we begin our survey of the long line of the centuries it is well that we should look at the steps by which our sources were secured.

The story of the rediscovery of Babylonia and Assyria is really twofold. Two lines of research, pursued separately for a long time, at last formed a union, and from that union has resulted present knowledge. By the one line the ancient sources were rediscovered, by the other men learned how to read them.

The first clue which led to the rediscovery of the ancient language of Babylonia and of Assyria was not found in either of these two lands. It was not found by a scholar who set out to search for it. It was not a brilliant discovery made in a day, to become the wonder of ages. It was rather the natural result of a long, tedious, and somewhat involved process. It began and long continued to be in the hands of travelers, each learning a little from his predecessors, and then adding a mite as the result of his own ob-

servation. It was found in the most unlikely place in Persia, far from Babylonia and Assyria. The story of its finding is worth the telling, not only because it is necessary to any just appreciation of our present knowledge of Assyria and Babylonia, but because it has its own interest, and is instructive as a history of the progress of knowledge.

In Persia, forty miles northeast of Shiraz, once the capital of the kingdom, there is a range of everlasting hills, composed of a marble of dark gray limestone, which bears the name Kūh-i-Rahmat, "Mountain of Mercy," or "Mountain of Grace," but was formerly known as Shāh-Kūh, "Royal Mountain." In front of this ridge, and in a semicircular hollow, there rises above the plain a vast terracelike platform. This was constructed by cutting down the lower slopes of the mountain, and so giving space for levelling and making a platform, which stretches from northwest to southeast 1,523 feet, and has a breadth of 920 feet. On the northeast side the native rock rises and forms a barrier, on the other three sides is a great wall varying from twenty to fifty feet in height, composed of stones, some of which "have been measured as much as fifty feet in length by six to ten feet in width," laid without mortar, but originally bound together on the upper surface by clamps of iron soldered with lead. This wall, broken into bays and angles, and with the double stair-

case, wide enough and easy enough in elevation for a troop of ten horsemen abreast to ride up it, belongs to the noblest constructions of the ancient Orient.

The surface of the platform displays four distinct levels, the highest being in the middle, on three of which are the remains of buildings, some of them now reduced to mere piles of rubbish. The decay gives it, indeed, a melancholy somberness to modern eyes, for the hand of time has been laid heavily upon it; but the ruins still form an object of grandeur worthy to be compared with the heavier and more compact mass of Baalbek. Viewed from a distance, the platform must always have been dwarfed by the mountain above it, but seen close at hand "we can well believe that no more sumptuous framework was ever wrought by man" (Curzon). Upon it are the remains of great edifices, which are now known to have been constructed by the Persian kings of the Achæmenian dynasty, Darius I (Hystaspis, 522–486 B. C.), Xerxes I (486–465 B. C.), and by Artaxerxes I (465–424 B. C.) and III (359–338 B. C.). The great staircase by which the platform was reached from the plain was built by Xerxes, as was the imposing porch above it. He also erected the Hall, of whose seventy-two columns only twelve now remain standing, forming even in their lonesomeness the most picturesque object in the entire group. A short

distance to the south is a building 132½ feet long by 96 feet broad, which has better withstood the crash of time than any others. It consisted originally of a central hall, supported by sixteen columns, with a portico of eight columns, and was erected by Darius, whose numerous inscriptions run round the window frames in narrow lines, and are incised in triple tablets on the inner sides of the massive doors. In this building the king probably resided during his annual visit to Persepolis in the spring time.

Near this palace, in a northwesterly direction, are the traces of a smaller palace of Artaxerxes III, and behind it are the ruins of the large palace of Xerxes, similar in form, but much larger than his father's, after which it may have been copied. His inscriptions make quite clear his relation to the structure, and here, we may well believe, he lived and transacted the business of the state. At a distance of one hundred and eighty feet east of this palace are the remains of a much smaller palace of unknown origin, and not far from it, and behind the mound of rubbish in the rear of the palace of Xerxes, is a yet smaller construction called by some travelers a portico, but of quite uncertain origin and purpose.

And now in our survey we come to the climax, for we stand at last amid a wilderness of broken stone columns, capitals and bases, the remains of the Great Hall of a Hundred Columns, whose in-

terior dimensions measure a square of two hundred and twenty-five feet, and whose roof was once supported by one hundred columns, in ten rows of ten each, and fronted on the north by a portico of sixteen columns. Not a single one of the one hundred and sixteen remains intact, but a reconstruction of them shows that they were thirty-seven feet high and twenty feet apart from axis to axis. On the doorways of this hall are bas-reliefs representing the great king here in combat with a mythological monster, and there, seated in state upon his throne, upheld by the arms of conquered nations and surmounted by a canopy with richly tasellated fringe, while above in the sky is the winged symbolic figure of the protecting god Ahuramazda. Here in a hall, second only in size to the overpowering hall at Karnak, sat the king in audience, and the representatives of many and great peoples did him homage.

We have surveyed all that remains of the once great structures which these kings had built for the pomp and circumstance of life. Behind the great hall of Xerxes is a royal mausoleum, cut out of, and far into, the native rock of the mountain, while a second is in a recess a short distance southeast of the terrace, and a third, never finished, lies nearly three quarters of a mile to the south. Here were buried some of these kings and perhaps among them Artaxerxes III, for, as we shall shortly see, the

tombs of the earlier kings have been found elsewhere.

About eight[1] miles north-northeast of the remains of Persepolis, beyond the small river Polvar, rises a wall of rock nearly perpendicular, in whose face are four ancient tombs, one of which, the second from the east, is now known to belong to Darius I, and the other three were probably those of Xerxes I, Artaxerxes I, and Darius II. They are all of the same size and style, in the shape of a Greek cross, the transverse section of which represents in half relief the façade of a palace. The upper section contains a rectangular stage, with a double row of human figures, each containing fourteen in number, representing, in varying costumes, the satrapies of the empire. Above these stands the king upon a dais, and in the air before and above him the symbol of his god, and behind a long inscription. On the same rock face are several Sassanian (226 A. D. and later) sculptures, which have given a name to the whole of the sculptures, for the natives call the place Naksh-i Rustam, "the portrait of Rustam," supposing the equestrian statue of the Sassanian king to represent their national hero Rustam.[2]

[1] Distances in the East are always rather indefinite, but this seems peculiarly so. Booth (*The Discovery and Decipherment of the Trilingual Inscriptions*, 1902, p. 7) makes it but four miles, while Weissbach (*Die Keilinschriften der Achämeniden*, p. xvii) makes it two hours. The estimate given in the text is Curzon's.

[2] This brief sketch of Persepolis and Naksh-i-Rustam depends largely upon Curzon (George N.), *Persia and the Persian Question*, 2 vols.,

With these pictures of the great Persian monuments, as they now are, before our eyes, and with these little hints concerning our present knowledge of their origin, we may turn to trace the long and at times romantic story of their exploration. In the Middle Ages this land of Persia became full of interest for various reasons. It had an important commerce with Europe, and that naturally drew men of trade from Europe into its extensive plateaus, that were reeking with heat in summer, and equally uncomfortable in the bleak cold of winter. The commercial contact of Persia led, also, most naturally to diplomatic intercourse of various kinds with European states, and this intercourse gradually made the land known in some measure to the West.

The earliest European, at present known to us, who visited the great terrace at the foot of

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London, 1872, vol. ii, pp. 148–196, and Jackson (A. V. Williams), *Persia Past and Present*, New York, 1906, p. 309, ff. I have also consulted and compared the following, A. J. Booth, *The Discovery and Decipherment of the Trilingual Cuneiform Inscriptions*, London, 1902. Flandin, Eugène et Coste, Pascal, *Voyage en Perse pendant 1840/41*, 6 vols. Paris, 1843–1854. Andreas, F. C., und Stolze, Franz, *Persepolis, Die achaemenidischen und sasanidischen Denkmäler und Inschriften*, 2 vols. Berlin, 1882 [with fine photographic illustrations]. Dieulafoy, Marcel, *L'art antique de la Perse*, 5 vols., Paris, 1884 [with beautiful illustrations, surpassing those of Stolze]. Sarre, Friedrich, und Herzfeld, Ernst, *Iranische Felsreliefs. Aufnahmen und Untersuchungen von Denkmälern aus Alt- und Mittelpersischer Zeit.* Text und Tafeln, Berlin, 1910 [with superbly reproduced photographs of both Persepolis and Naksh-i Rustam, which surpass all the preceding]. Weissbach, F. H., *Die Keilinschriften am Grabe des Darius Hystaspis. Abhandlungen der philologisch-historischen Klasse der Königl. Sächsischen Gesellschaft der Wissenschaften.* Band xxix, I. Leipzig, 1911.

Mount Rachmet was a wandering friar, Odoricus, or Odoric, by name. He was going overland to Cathay, and on the way passed between Yezd and Huz, about 1320 A. D. He had no time to look at ruins, and appears hardly to have seen them at all. Yet his record is the first word heard in Europe concerning the ruins at Persepolis:

"I came unto a certaine citie called Comum, which was an huge and mightie city in olde time, conteyning well nigh fiftie miles in circuite, and hath done in times past great damage unto the Romanes. In it there are stately palaces altogether destitute of inhabitants, notwithstanding it aboundeth with great store of victuals."[1]

The passage is disappointing. Odoric was a

[1] *The Second Volume of the Principal Navigations, Voyages, Traffiques, and Discoveries of the English Nation*, etc. By Richard Hakluyt, Preacher, and sometime Student of Christ Church, Oxford. Imprinted at London, anno 1599, p. 54. [Here beginneth the iournall of Frier *Odoricus*, one of the order of the Minorites, concerning strange things which hee sawe among the Tartars of the East.] The following is the original Latin text:

"Ab hac, transiens per civitates et terras, veni ad quamdam civitatem nomine Coprum, quae antiquitatus civitas magna fuit: haec maximum damnum quondam intulit Romae; eius autem muri bene quadraginta miliarum sunt capaces. Et in ea sunt palacia adhuc integra, et multis victualibus haec abundat." (See *Sopra la Vita e i Viaggi del Beato Odorico da Pordenone, Stuni del Chierico Francescano Fr. Teofilo Domenichelli.* In Prato, 1881, pp. 156, 157.) The name of the place called Comum, above, is variously written by different authorities: Comerum, YULE; Conium, VENNI; Comum, UTIN.; Coman, MUS.; Comerum, FARS. The manuscript readings are very diverse, but I believe with Yule (*Cathey and the Way Thither*, by Col. Henry Yule, C. B., London, Hakluyt Society, 1866, p. 52, note) that the reading to be preferred is Comerum, which is the Camara of Barbaro, the Kinara of Rich, and the Kenaré of Mme. Dieulafoy.

"man of little refinement"[1] and, though possessed of a desire to wander and see strange sights, cared little for the intellectual or spiritual meaning of great places. It is an oft-recurring statement with him that he found good "victuals," and with that his simple soul was content. He evidently did not know what place the ancient ruins marked, and that he cared at all does not appear. So simple is his word that men have even doubted whether he ever saw the ruins with his own eyes; though there is no real reason to doubt that he did. But even though he saw little and said less, his narrative was almost a classic before the invention of printing, and was copied frequently, as the numerous manuscripts still in existence show.[2] Not very long after the invention of printing his story found expression in type. Then it became

[1] This is the judgment of Colonel Yule [*ib.* i, p. 8], and everything seems to me to bear it out.

[2] Cordier enumerates seventy-nine as still existing in London, Oxford, Cambridge, Paris, etc

See for biographical and critical material: *Les Voyages en Asie au XIVe Siècle du Bienheureux Frère Odoric de Pordenone Religieux de Saint-François*, publiés avec une introduction et des notes par Henri Cordier. Paris, 1891.

The narrative of Odoricus was first published in 1513 under the title, "*Odorichus de rebus incognitis*, Pesaro [per Girolamo Soncino], 1513, in 4." Only one copy of this extraordinarily rare book is known to exist, and that is in the Reale Biblioteca Palatina de Parme, and I have not seen it. It is described with facsimiles in Cordier, pp. cxvii–cxxiii.

A second edition appeared in 1528, at Paris, and the third reprinting was in Ramusio, *Navigationi et Viaggi*, ii, Venetia, 1583, pp. 245–253. This beautiful edition I have seen. The title of the section is "Viaggio del Beato Odorico da Vdine, dell' ordine de' frati Minori, Delle usanze, costumi, & nature, di diverse nationi & genti del Mondo, & del maritirio di quattro frati dell'ordine predetto, qual patirono tra gl'Infedeli."

a call to others to go and see also. It is only a first voice in the dark—this word of Odoric—and long would it be ere another wayfarer should see the same relics of the past.

In the year 1472 the glorious republic of Venice dispatched an envoy to the Court of Uzun Hassan. His name was Josophat Barbaro, and he passed the same way as Odoric, but saw a little more, which he thus describes:

"Near the town of Camara is seen a circular mountain, which on one side appears to have been cut and made into a terrace six paces high. On the summit of this terrace is a flat space, and around are forty columns, which are called Cilminar, which means in our tongue Forty Columns, each of which is twenty cubits long, as thick as the embrace of three men; some of them are ruined; but, to judge from that which can still be seen, this was formerly a beautiful building. The terrace is all of one piece of rock, and upon it stand sculptured figures of animals as large as giants, and above them is a figure like those by which, in our country, we represent God the Father inclosed in a circle, and holding a ring in his hand; underneath are other smaller figures. In front is the figure of a man leaning on his bow, which is said to be a figure of Solomon. Below are many others which seem to support those above them, and among these is one who seems to wear on his head a papal miter, and holds up his open hand, apparently with the

intention of giving his benediction to those below, who look up to him, and seem to stand in a certain expectation of the said benediction. Beyond this there is a tall figure on horseback, apparently that of a strong man; this they say is Samson, near whom are many other figures, dressed in the French fashion and wearing long cloaks; all these figures are in half relief. Two days' journey from this place there is a village called Thimar, and two days further off another village, where there is a tomb in which they say the mother of Solomon was buried. Over this is built an edifice in the form of a chapel, and there are Arabic letters upon it, which say, as we understand from the inhabitants of the place, Messer Suleimen, which means in our tongue Temple of Solomon, and its gate looks toward the east."[1] We shall soon learn that in this latter building the modern world had a memorial not indeed of Solomon but of a far greater king, the builder of a mighty empire.[2]

Barbaro had not made much advance upon Odoric, but his account was not altogether fruitless, though soon to be superseded.

When Shah Abbas the Great, king of Persia, began his long and remarkable reign (1586) Per-

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[1] *Viaggi Fatti da Vinetia, alla Tana, in Persia, in India et in Constantinopli*, con la descrittione particolare di Citta, Luoghi, Sitti, Costumi, et della Porta del gran Turco & di tutte le intrate, spese, & modo di governo suo, & della ultima Impressa contra Portoghesi. In Venezia, M.D.XLIII, p. 51.

[2] See below, page 49, f.

sia was a dark land to European eyes. It was he who opened it freely to ambassadors from Europe, all of whom he treated with a magnificent courtesy. The first of these ambassadors to arrive in his kingdom came from the kingdom of Portugal, sent out by Philip III, king of Spain and Portugal. This man was an Augustinian friar, Antonio de Gouvea, who came with messages both of peace and of war. It was his aim to endeavor to carry Christianity among the Persians—a message of peace—but also to induce Abbas to make war on the Osmanli Turks. He was somewhat more successful in the second than in the first object, though he did establish an Augustinian society at the Persian court. After many and sore adventures at the hands of sea pirates he again saw his native land, and published an account of his adventures. In this story he tells of a visit to Persepolis, and in these terms:

"We continued our journey as far as a village called Chelminira, which in their language means Forty Minarets, because that was the number in the tomb of an ancient king which stood there. . . . We went to see the tomb of which I have spoken, and it is my firm belief that the mausoleum which Artemisia erected to her husband was not more notable, though it is held as one of the wonders of the world; but the mausoleum has been destroyed by time, which seems to have no power against this monument, which has also

resisted the efforts of human malice. . . . The place is between two high ridges, and the tomb of which I have made mention is at the foot of the northern ridge. Those who say that Cyrus rebuilt the city of Shiraz affirm also that he built for himself this famous tomb. There are indications that Ahasuerus, or Artaxerxes, erected it for himself, besides another near it which he made for Queen Vashti; and this opinion is made more probable by the consideration of the short distance from this site to the city of Suzis, or Shushan, in which he generally resided. . . . At the foot of the ridge began two staircases facing one another, with many steps made of stones of so great a size that it will be beyond belief when I affirm that some of them, when they were first hewn, were more than twenty-five palms in circumference, ten or twelve broad, and six or eight high; and of these, there were very many throughout the whole structure, for the building was chiefly composed of them; and it was no small wonder to consider how they could have been placed one upon the other, particularly in the columns, where the stones were larger than in any other part. That which astonished us most was to see that certain small chapels were made of a single stone—doorway, pavement, walls, and roof. . . . The staircases, of which I have spoken, met on a broad landing, from which the whole plain was visible. The walls of the staircases were entirely covered with figures in re-

lief, of workmanship so excellent that I doubt whether it could be surpassed; and by ascending the staircases access was gained to an extensive terrace, on which stood the forty columns which gave their name to the place, each formed, in spite of their great size, of no more than three stones. . . . The bases might be thirty palms round, and on the columns were beautifully carved figures. The porches through which the terrace was entered were very high and the walls very thick; at each end stood out figures of lions and other fierce animals, carved in relief in the same stone; so well executed that they seemed to be endeavoring to terrify the spectators. The likeness of the king was drawn life-size upon the porches and in many other parts.

"From this place was an ascent to another much higher, where was a chamber excavated in the hillside, which must have been intended to contain the king's body, although the natives, imagining that it contained a different treasure, have broken into it, having little respect for the ancient memory of him who constructed it. . . .

"The inscriptions—which relate to the foundation of the edifice, and, no doubt, also, declare the author of it—although they remain in many parts very distinct, yet there is none that can read them, for they are not in Persian, nor Arabic, nor Armenian, nor Hebrew, which are the languages current in those parts; and thus all helps to blot out the memory of that which

the ambitious king hoped to make eternal. And because the hardness of the material of which it is built still resists the wear of time, the inhabitants of the place, ill treated or irritated by the numbers of visitors who came to see this wonder, set to work to do it as much injury as they could, taking as much trouble perhaps to deface it as the builders had done to erect it. The hard stone has resisted the effect of fire and steel, but not without showing signs of injury."[1]

From this narrative it is plain that the militant friar had learned more of the ruins than had Odoric or Barbaro. He no longer believes that Solomon had aught to do with them, but connects them with fair degree of exactness with the Persian kings. He also is more accurate and

[1] Relaçam, AM | em que se tra- | tam as gueras e gran | des victorias que alcan- | çouo grãde Rey da Persia Xá Abbas do grão Tur | co Mahometto, & seu filho Amethe: as quais | resultarão das Embaixadas, q̃ por mandado | da Catholica & Real Magesta de del Rey | D. Felippe segundo de Portugal fize- | rão algũs Religiosos da ordem dos Eremitas de S. Augusti- | nho a Persia. |

Composto pella Padre F. Antonio de Gouvea | Religioso da mesma ordem, Reitor do Col | legio de sancto Augustinho de Goa, & | professor da sagrada Theologia.

Impresso em Lisboa per Pedro Crasbeeck.—Anno M.DCXI, fol. 30, recto et seq.

Relation | des Grandes | Guerres et | victoires obtenues par | le Roy de Perse | Cha Abbas | contre les Empereurs de Turquie | Mahomet et Achmet son fils. | En suite du voyage de quelques | Religieux de l'Ordre des Hermites de S. Augustin envoyez | en Perse par le Roy Catholique Dom Philippe Second | Roy de Portugal.

Par le P. Fr. Anthoine de Gouvea, Religieux du mesme | Ordre, Recteur du College de S. Augustin de Goa, | Professeur en Theologie.

Traduit de l'Original Portugais, imprimé à Lisbonne avec Licence | de l'Inquisition, de l'ordinaire & du Palais.

A Rouen, | chez Nicolas Loyselet, près S. Lo, | derriere le Palais, à l'Oyselet.—1646, pp. 78, ff.

explicit concerning the inscriptions which he saw. They had already begun to exercise over his mind some little spell—a spell which was soon to hold a large part of Europe beneath its sway.

The next ambassador whom Philip III sent out to Shah Abbas was Don Garcia de Sylva y Figueroa, who likewise visited the great ruins. On his return to Isfahan he wrote a letter, in 1619, to the Marquess de Bedmar. It was written originally in Spanish, but immediately was done into Latin and published at Antwerp in 1620. This letter of a brilliant man completely superseded Gouvea's account, and evidently made a profound impression in Europe. Within five years it was translated into English, so receiving still greater publicity. His description of the ruins of Persepolis runs after this fashion:

"There are yet remayning most of those huge wilde buildings of the Castle and Palace of Persepolis, so much celebrated in the monuments of ancient writers. These frames do the Arabians and Persians in their owne language call Chilminara: which is as much as if you should say in Spanish *Quarenta Columnas*, or *Alcoranas:* for so they call those high narrow round steeples which the Arabians have in their Mesquites. This rare, yea and onely monument of the world (which farre exceedeth all the rest of the World's miracles that we have seen or heard of), sheweth it selfe to them that come to this Citie from the

Towne of Xiria, and standeth about a league from the River Bandamir, in times past called Araxis (not that which parteth Media from the greater Armenia), whereof often mention is made by Q. Curtius, Diodorus, and Plutarch: which Authors doe point us oute the situation of Persepolis, and doe almost lead us unto it by the hand. The largenesse, fairnesse, and long-lasting matter of these Pillars appeareth by the twentie which are yet left of alike fashion; which with other remaynders of those stately Piles do move admiration in the minde of beholders, and cannot but with much labour and at leisure be layed open. But since it is your Lordships hap to live now at Venice, where you may see some resemblance of the things which I am about to write of, I will briefly tell you that most of the pictures of men, that, ingraven in marble, doe seele the front, the sides, and statelier parts of this building, are decked with a very comely cloathing, and clad in the same fashion which the Venetian Magnificoes goe in: that is Gownes downe to the heeles, with wide sleeves, with round flat caps, their hair spred to the shoulders, and notably long beards. Yee may see in these tables some men sitting with great maiestie in certayne loftier chayres, such as use to bee with us in the Quires and Chapter-Houses of Cathedrall Churches, appointed for the seates of the chiefe Prelates; the seate being supported with a little foote-stoole neatly made, about a hand

high. And, which is very worthy of wonder in so divers dresses of so many men as are ingraven in these tables, none cometh neere the fashion which is at this day, or hath beene these many Ages past, in use through all Asia. For though out of all Antiquitie we can gather no such arguments of the cloathing of Assyrians, Medes, and Persians, as we finde many of the Greekes and Romanes; yet it appeareth sufficiently that they used garments of a middle size for length, like the Punike vest used by the Turks and Persians at this day, which they call Aljuba, and these Cavaia: and shashes round about their heads, distinguished yet both by fashion and colour from the Cidaris, which is the Royall Diademe. Yet verily in all this sculpture (which, though it be ancient, yet shineth as neatly as if it were but new-done) you can see no picture that is like or in the workmanship resembleth any other, which the memorie of man could yet attaine to the knowledge of from any part of the World: so that this worke may seeme to excede all Antiquities. Now nothing more confirmeth this than one notable Inscription cut in a Jasper table, with characters still so fresh and faire that one would wonder how it could scape so many Ages without touch of the least blemish. The Letters themselves are neither Chaldean, nor Hebrew, nor Greeke, nor Arabike, nor of any other Nation which was ever found of old, or at this day to be extant. They are all three

cornered, but somewhat long, of the forme of a Pyramide, or such a little Obeliske as I have set in the margin (▵); so that in nothing do they differ from one another but in their placing and situation, yet so conformed that they are wondrous plaine, distinct and perspicuous. What kind of building the whole was (whether Corinthian, Ionick or mixt) cannot be gathered from the remaynder of these ruines: which is otherwise in the old broken walls at Rome, by which that may easily be discerned. Notwithstanding the wondrous and artificiall exactness of the worke, the beautie and elegancy of it shining out of the proportion and symmetrie, doth dazzle the eyes of the beholders. But nothing amazed me more than the hardnesse and durablenesse of these Marbles and Jaspers; for in many places there are Tables so solide, and so curiously wrought and polished that ye may see your face in them as in a glasse. Besides the Authors by me alreadie commended, Arrianus and Justine make special mention of this Palace; and they report that Alexander the Great (at the instigation of Thaïs) did burne it downe. But most delicately of all doth Diodorus deliver this storie.

"The whole Castle was encompassed with a threefold circle of walls, the greater part whereof hath yielded to the time and weather. There stand also the sepulchres of their kings, placed on the side of that hill, at the foote whereof the Castle itself is built; and the monuments stand

just so farre from one another as Diodorus reporteth. In a worde, all doth so agree with his discourse of it that he that hath seene this and read that cannot possibly be deceived."[1]

Sylva y Figueroa had evidently more interest in the peoples of the ancient Orient than in their languages. He had not given much attention to the inscriptions which he saw, and the idea of attempting to copy any of these strange characters never seems to have entered his mind. It was a pity that this did not occur to him, for the wide dissemination of his letter would have earlier introduced Europe to the idea that here was another great field for study. These mysterious signs would even then have attracted attention. But Europe was now soon to learn something of the appearance of these strange signs.

In the years 1614–1626 Pietro della Valle traversed a large part of Turkey, Persia, and India. On this journey he wrote "familiar" letters, which were in reality almost treatises upon geography, history, and ethnology, to a friend and physician, Mario Schipano, at Naples. In passing through Persia he visited the ruins of

[1] Garciae Silva Figueroa | Philippi III | Hispaniarum Indiarumq. Regis | Ad Persiae Regem Legati | De | Rebus Persarum | Epistola. | v Kal. an. M.DC.XIX.

Spahani exarata | Ad Marchionem Bedmari | nuper ad Venetos, nunc ad Sereniss. | Austrriae Archiduces, Belgarum Principes | Regium Legatum | Antverpiae | ex officina Plantiniana.—M.DC.XX, p. 6, ff.

English translation in *Purchas His Pilgrimes*. London, 1625. Part ii, 1533–1534.

Persepolis, once the capital of ancient Persia. Here he marked that the city was surrounded upon three sides by mountains which broke off abruptly, leaving smooth precipice surfaces around it. Upon this smooth rock in a number of places he found strange marks, evidently made by the hand of man, and intended to mean something. What language this might be or what letters he had no idea. In a letter written October 21, 1621, he described the appearance of these strange signs, and even went so far as to copy down into his letter a few of them:[1]

and that without very great exactness. Indeed, he makes a sort of apology for not having done it better, saying:

"I have copied from among them five of those which most frequently occur in the best manner I was able. As, however, the lines were completely filled, I was unable to ascertain whether they were written from right to left, after the eastern manner, or contrary, as we are wont." He goes on, however, to remark: "I am induced to believe they were read from left to right, after our manner, from the base being at the left,

[1] *Viaggi di Pietro della Valle, il Pellegrino. . . . Descritti da lui medeimo in 54. Lettere familiari . . . All' erudito, e fra' più cari, di molti anni suo Amico Mario Schipano.* In Roma MDCL. Vol. iii, p. 206. Printed 1658.

the point towards the right, and the point always being downwards."[1]

He had thus already begun to speculate upon the question as to whether this unknown language was read from right to left, as were most of the Oriental tongues of which he had knowledge, or whether it was to be read, like the European languages, from left to right. The appearance of these few signs in his published letters were the first sight which Europe gained of the appearance of the written language of ancient Persia. His letters were repeatedly reprinted and must have had an extensive circulation. So came the learned of Europe to know that the ancient Persians had carved some sort of language on the stones at Persepolis, but what these signs might mean none knew, and there was apparently no clue to their meaning. But to Pietro della Valle belongs the honor of beginning the long line of men who contributed little by little toward the reading of Assyrian and Babylonian books.[2]

Pietro della Valle was, however, not long left

[1] The whole of this letter (No. XV) is reprinted in English, in John Pinkerton, *A General Collection of . . . Voyages and Travels* (London, 1811), ix, pp. 98, ff., but the five characters are not reproduced.

[2] Pietro della Valle was a man of learning in his age, writing and speaking Turkish, Persian, and Arabic, and possessing some knowledge of Coptic. He was a close and careful observer, and accurate, for the greater part, in the reproduction of his observations. A brief sketch of his life is printed in the introduction to *The Travels of Pietro della Valle in India*, from the old English translation of 1664, by G. Havers. In 2 vols. Edited by Edward Grey. London. Printed for the Hakluyt Society, 1892.

in possession of the honors of primacy in his examination of Persepolis. In 1627 Sir Dodmore Cotton, accredited to the Persian court as ambassador, sailed away from England. In his suite was a boy of nineteen years of age, by name Thomas Herbert. The party landed at Gombrun, Persian Gulf, on January 10, 1627–8, and thence proceeded to Ashraff for an audience with the king. They later visited Mount Taurus and Casbin, where Cotton and Sir Robert Shirley, who was also in the suite, died, and Herbert was left free to continue his travels. Herbert saw much of Persia and of Babylonia before reaching England at the end of 1629. In 1634 he published an account of these travels and devoted a few pages to Persepolis and Chilmanor.[1] In his description he is very entertainingly discursive concerning the "Images of Lions, Tygres, Griffins, and Buls of rare sculpture and proportion"[2] which he saw there, but he says not a word about inscriptions. In 1638 he issued a second edition, considerably enlarged, in which Persepolis receives more attention, and is introduced in quaint and enthusiastic phrase, thus:

"Let us now (what pace you please) to Persepolis, not much out of the road: but were it a thousand times further, it merits our paines to

[1] A | Relation | of some yeares | travaile, begunne | Anno 1626 | Into Afrique and the greater Asia, especially | the Territories of the Persian Monarchie: and | some parts of the Orientall Indies, | and isles Adjacent. . . . by T. H. Esquier. London, 1634, pp. 56–60.

[2] *Ibid.*, p. 59.

view it; being indeed the only brave Antique-Monument (not in Persia alone) but through all the Orient."[1]

In this edition he comes up to the question of inscriptions, and so alludes to them:

"In part of this great roome (not farre from the portall) in a mirrour of polisht marble, wee noted above a dozen lynes of strange-characters, very faire and apparent to the eye, but so mysticall, so odly framed, as no Hierogliphick, no other deep conceit can be more difficultly fancied, more adverse to the intellect. These consisting of Figures, obelisk, triangular, and pyramidall, yet in such Simmetry and order as cannot well be called barbarous. Some resemblance, I thought some words had, of the Antick Greek, shadowing out Ahasuerus Theos. And, though it have small concordance with the Hebrew, Greek, or Latine letter, yet questionlesse to the Inventer it was well knowne; and peradventure may conceale some excellent matter, though to this day wrapt up in the dim leafes of envious obscuritie."[2]

Even here Herbert did not cease the work of elaborating his description of Persepolis. He did, however, rest a few years, and in that time another traveler had seen the ruins. This was J. Albert de Mandelslo, a member of an "Em-

[1] *Ibid.*, second edition, p. 143.

[2] Some yeares | Travels | into | Divers Parts of | Asia and Afrique | . . . Revised and enlarged by the Author. London, 1638, pp. 145, 146.

bassy sent by the Duke of Holstein to the great Duke of Muscovy and the King of Persia," who traveled in the East 1638–1640. The account of his wanderings was written down by Olearius,[1] secretary to the embassy, and an English translation appeared in 1662. Mandelslo also described the columns as usual and then added this statement:

"Near these chambers may be seen, engraven upon a square pillar, certain unknown characters, which have nothing common with either the *Greek*, *Hebrew*, or *Arabian*, nor indeed with any other language. There are twelve lines of these characters, which, as to their figure, are triangular, Piramidal, or like obelisques, but so well graven and so proportionate, that those whot did them cannot be thought Barbarians: Some believe, they are Telesmes, and that they contain some secrets which Time will discover."[2]

In 1677 Herbert issued the fourth impression of the account of his travels. In this he devotes still more space to Persepolis and its inscriptions, and it is altogether probable that he was moved to this by Mendelslo's book, and being

[1] His name was Oelschlaeger, but, after a common custom of the time, he preferred the Latin Olearius.

[2] The first edition which I have been able to find of Mendelslo's travels appeared at Utrecht in 1651, *in Neer duyts overgeset door D. V. Wageninge.* The first German edition which I have seen was published at "Schleszwig In Jahr MDCLVI." The first English edition bears title-page thus: *The Voyages & Travels of the Ambassadors sent by Frederick, Duke of Holstein . . .* written originally by Adam Olearius, Secretary to the Embassy. Faithfully rendered into English, by John Davies of Kidwelly. London, M.DC.LXII. P. 5.

desirous that he should not lose the credit of being first to publish a copy of the inscriptions, he includes a specimen plate. In its revised form the account deserves quotation here:

"Adjoyning these toward the West is a Jasper or Marble Table about twenty foot from the pavement, wherein are inscribed about twenty lines of Characters, every line being a yard and a half broad or thereabouts; all of them are very perfect to the eye, and the stone so well polished that it reserves its lustre. The Characters are of a strange and unusual shape; neither like Letters nor Hieroglyphicks; yea so far from our deciphering them that we could not so much as make any positive judgment whether they were words or Characters; albeit I rather incline to the first, and that they comprehended words or syllables, as in *Brachyography* or Short-writing we familiarly practise: Nor indeed could we judge whether the writing were from the right hand to the left, according to the *Chaldee*, and usual manner of these Oriental Countreys; or from the left hand to the right, as the Greeks, Romans and other Nations imitating their Alphabets have accustomed. Nevertheless, by the posture and tendency of some of the Characters (which consist of several magnitudes) it may be supposed that this writing was rather from the left hand to the right, as the *Armenian* and *Indian* do at this day. And concerning the Characters, albeit I have since com-

pared them with the twelve several Alphabets in *Postellus*, and after that with those eight and fifty different Alphabets I find in *Purchas*, most of which are borrowed from that learned Scholar Gromay, which indeed comprehend all or most of the various forms of letters that either now or at any time have been in use through the greatest part of the Universe, I could not perceive that these had the least resemblance or coherence with any of them: which is very strange, and certainly renders it the greater curiosity; and therefore well worthy the scrutiny of some ingenious Persons that delight themselves in this dark and difficult Art of Exercise of deciphering. For, how obscure soever these seemed to us, without doubt they were at some time understood, and peradventure by *Daniel*, who probably might be the surveyour and instruct the Architector of this Palace, as he was of those memorable Buildings at *Shushan* and *Ecbatan;* for it is very likely that this structure was raised by *Astyages* or his Grandson *Cyrus*, and is acknowledged that this great Prophet (who likewise was a Civil Officer in highest trust and repute during those great revolutions of State under the mighty Monarchs *Nebuchodonosor*, *Belshazzar*, *Astyages*, *Darius*, and *Cyrus*) had his mysterious Characters: So as how incommunicable soever these Characters be to us (for they bear the resemblance of pyramids inverted or with bases upwards, Triangles or

Delta's, or (if I may so compare them) with the Lamed in the *Samaritan* Alphabet, which is writ the contrary way to the same letter in the *Chaldee* and *Hebrew*), yet doubtless in the Age these were engraven they were both legible and intelligible; and not to be imagined that they were there plăced either to amuse or to delude the spectators; for it cannot be denied but that the *Persians* in those primitive times had letters peculiar to themselves, which differed from all those of other Nations, according to the testimony of a learned Author, *Persae proprios habebant Characteres, qui hodie in vestigiis antiquorum Monumentorum vix inveniunter.* However, I have thought fit to insert a few of these for better demonstration:

which nevertheless whiles they cannot be read, will in all probability like the *Mene Tekel* without the help of a Daniel hardly be interpreted."[1]

These quotations from the successive editions of Herbert show a book in the very process of growth, but they unfortunately do not show much development of the author's knowledge.

[1] Some Years | Travels | into | Divers Parts | of | Africa and Asia the Great | . . . | In this fourth Impression are added (by the Author now living) as well many Addi | tions throughout the whole work, as also several Sculptures, never before Printed. | London, 1677, pp. 141, 142.

Herbert had, however, in the fourth impression consulted his notes to greater advantage, and brought forth from them some copies of cuneiform signs. These were the first that had been published in England, but unhappily they did not form a complete inscription. The first two lines come from one inscription, and the third from another, and the copying was not very well done. It was a pity that Herbert had not taken the time and pains necessary to make a complete as well as a correct copy of one inscription, however small. That would have been a genuine contribution to learning. As it happened, Herbert's book contributed nothing of scientific importance to the pursuit of knowledge concerning the East. It is, however, certainly true that this entertainingly written narrative may have influenced later work by arousing fresh interest in the ruined palaces, and the mystic inscriptions at Persepolis.

The copies of a few signs by Pietro della Valle and by Herbert, however, aroused no special interest, and there was in reality hardly enough of these signs even to awaken curiosity.

In the same manner the few signs which an English traveler, Mr. S. Flower, copied and published in England, failed of arousing any interest in the rocks and their inscriptions at Persepolis.[1]

The first real impulse to an attempt at un-

[1] These copies of Mr. Flower had a most singular history, an outline of which is given in the Excursus below, see p. 95.

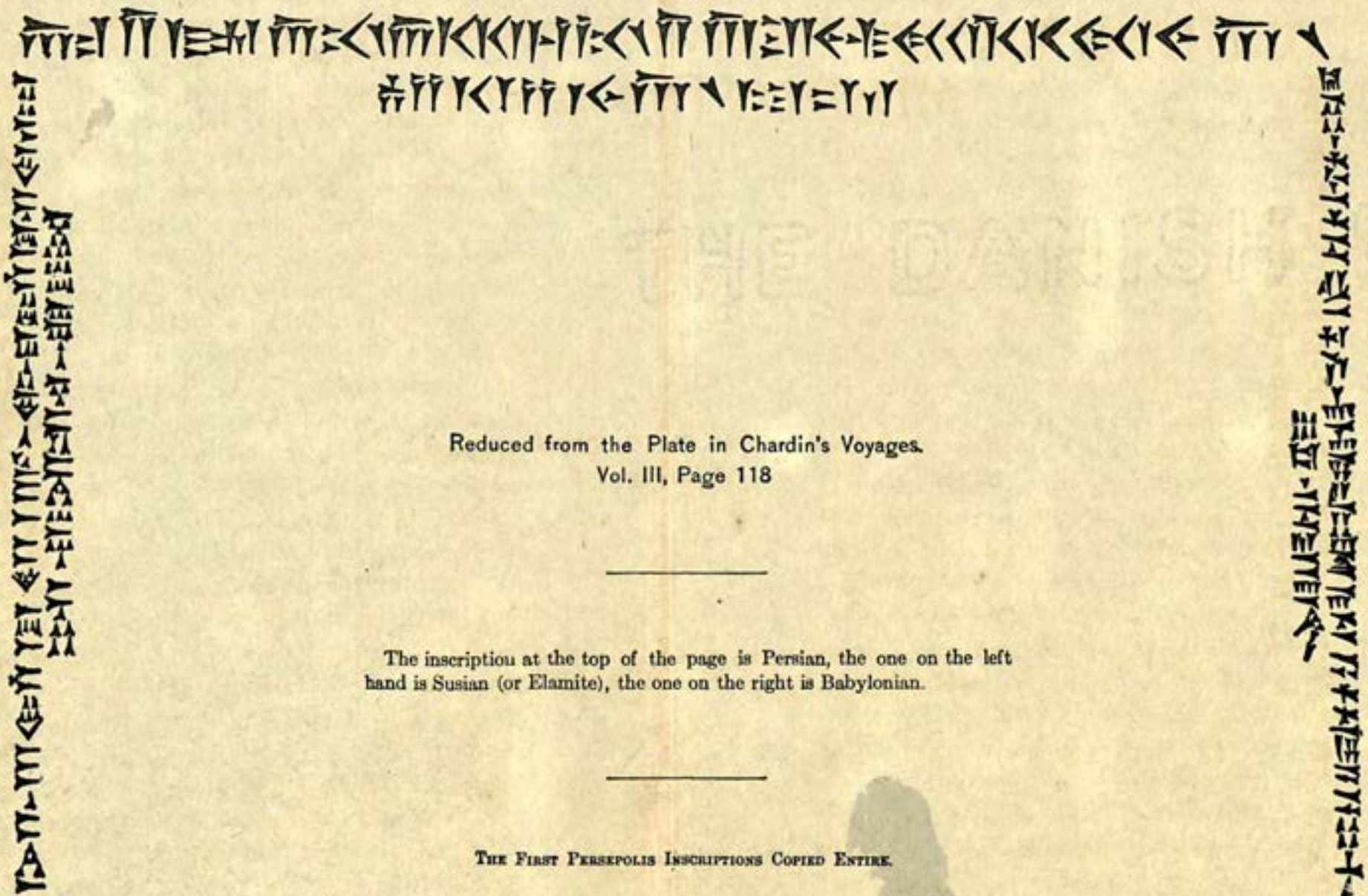
raveling the secrets of Persepolis was given by Sir John Chardin. Born at Paris in 1643, the son of a rich jeweler, he went early in life upon business to Persia and India. He made three visits to Persepolis, in 1666, 1667, and 1674, and the account was published at Amsterdam, in 1711, in two forms, in three volumes quarto and in ten volumes duodecimo, and a second improved edition appeared in 1735. In the meantime (in 1681) he had become an English citizen because of the persecution of French Protestants, and was soon appointed court jeweler, and knighted by Charles II at Whitehall November 17, 1681. He died in London on Christmas Day, 1713, and was buried in Chiswick Church, and so great was his well-deserved fame as a merchant[1] and traveler that a tablet was erected in Westminster Abbey, in the south aisle, bearing the legend, "Sir John Chardin—nomen sibi fecit eundo."

The chief glory of Chardin's works, at the present day, is the magnificent copper plates, twenty-three in number, made of Persepolis, from the drawings of M. Grélot, whom he had taken to Persia for this purpose. In these engravings Europe saw for the first time the splendor of the ruins, and the excellent ground plan enabled the fascinated reader to comprehend the size of the platform and thus more

[1] He is called in the correspondence of his time "the flower of merchants."

perfectly to realize the grandeur of the buildings which the successive plates revealed to his eyes. None of the most prolix descriptions of former travelers could give a reader so vivid an impression as these plates, and the description which accompanied them was quite worthy of the illustrations. The travelers of recent days have seen these monuments after a lapse of nearly three hundred years, but to Chardin's eyes they were "still so complete and so sharply defined that the work appears to have only just come from the sculptor's hands." He discusses the various theories concerning their origin; some ascribing them to the period before the deluge, others to Solomon, while he, after much weighing of evidence, decides in favor of Jamshid, the fourth king of Persia, whom he believes to have flourished about the time of Jacob's descent into Egypt. This would make the ruins far more ancient than the Persian period, as he points out with evident enthusiasm. In this conjecture he had gone widely astray. But he was to atone for it very handsomely in respect of the inscriptions. Many things he had learned in his journeyings, and among them had found how important it was to make copies of inscriptions, whether one could read them or not. He was the first to copy one of these little Persian inscriptions entire. When this was published[1] it

[1] *Voyages de Monsieur le Chevalier Chardin, en Perse et autres lieux de l'Orient*, tom. iii, plate at p. 118. Amsterdam, 1711.



Reduced from the Plate in Chardin's Voyages.
Vol. III, Page 118

The inscription at the top of the page is Persian, the one on the left hand is Susian (or Elamite), the one on the right is Babylonian.

THE FIRST PERSEPOLIS INSCRIPTIONS COPIED ENTIRE.

was at last possible for students to see some of the peculiarities of this method of writing. It was now plainly seen that the characters were made up of little wedges and arrowheads—of which the latter were formed by the combination of two of the former. By combinations of these wedges and arrowheads the most complex-looking signs were produced. In all of them this one abiding rule seemed to be followed, that the wedges always pointed to the right or downward, and that the arrowheaded forms were always open toward the right. The prevalence of this rule seemed to confirm the guess already hazarded more than once that the language was really to be read from left to right. But, though Chardin's published inscription awakened, for the first time, some genuine interest in the matter, there was found no man so bold as to essay a decipherment of the enigmatic signs.

Chardin also visited Naksh-i Rustam, and described the four tombs. He observed that the entrances were small and very difficult to reach, and records that so far as he knew they had never been entered by a European. He induced one of his valets to attempt to make an entrance on the promise of a reward of three écus (about nine francs in all). He then records, with lively enjoyment, the dénouement. Immediately after the valet had entered he uttered wild cries, for in the darkness he had encountered large numbers of pigeons, who beat against him as they

sought escape, while he feared that he was being attacked by spirits. He withdrew quickly, but was persuaded to reenter when another valet joined him. They discovered, near the entrance the lids of three sarcophagi, and on the left four tombs, each six feet long.[1]

After Chardin, the next man to see the ruins of Persepolis was Jean Baptiste Tavernier, who was, however, too much interested in himself and in his reception by the king to pay much attention to the past and its great monuments. But in a short time there came another traveler who was interested in the past more than the present. On June 13, 1693, Giovanni Francesco Gemelli-Carreri started away from Naples to make the circuit of the globe, and to the same city he returned December 3, 1699, having accomplished the task. In 1694 he was in Persia and naturally visited the ruins of Persepolis. He is very explicit in his statements as to how he traveled to the ruins and is careful in reporting the dimensions of everything which he saw. After some preliminary description he makes some statements about the inscriptions in this form:

[1] L. Langlès, *Voyages du Chevalier Chardin, en Perse, et autres lieux de l'Orient.* Paris, 1811, viii, pp. 347, 348.

In this edition the plates are reproduced in a folio Atlas, forming a magnificent series beginning with two plates (each numbered LIII) giving general views of the entire platform. Plate LIV is the first attempt to make a drawing to scale of the platform, but the position of the buildings is not marked. Plate LXIX contains the inscriptions mentioned above.

"On the South Side outwards there is an Inscription cut on an empty space 15 spans long, and 7 broad, in such a character that there is now no understanding Person in the World that can make anything of it. It is neither Caldee, nor Hebrew, nor Arabick, nor Greek, nor of any of those Languages the Learned have Knowledge, but only Triangles of several Sorts, severally plac'd, the various placing whereof perhaps formed divers words, and express'd some Thoughts. The most receiv'd Opinion is, that they are Characters of the ancient Goris, who were Sovereigns of Persia; but this is not easily to be made out, the Goris themselves being at present very ignorant as to their Antiquities, and unfit to give any Judgment of such things. . . . Not far off on a Pilaster of the same black marble, is an Inscription in the same Character, and another on such another Stone; which I observing, and remembering those I had seen before, began to consider with myself, how easily human Judgment is mistaken, and how different things happen to what Man proposes to himself; for whereas the Author thought by means of those inscriptions to have eterniz'd his Memory with Posterity, which the beauty of the work well deserv'd, yet quite the contrary we see is fallen out. . . .

"Such precious Remains of Antiquity well deserve to be cut in Copper for the satisfaction of the Ingenious, before they are quite lost through

the fault of the natives; but it is a difficult matter to draw above two thousand Basse Relieves, and a vast charge to print them. The Reader therefore will think it enough that I have drawn the Plan of the Palace, with some of the principal Figures; and there may be some knowledge of the several Habits of the antient *Persians;* and two lines of twelve there are in the inscription on the Pilaster of the first Floor; perhaps hereafter some more fortunate searcher into the Oriental languages may employ his wit on it.

"Having very well spent all the Day in seeing and distinctly observing the best part of those Antiquities, I returned, and was scarce come to the place where I had left my Armenian Servant before I hear'd him as'k me whether I had found the Treasure; he believing the Inscriptions were in Portuguese, and that I had Read them and taken the Treasure, as the *Carvansedar* had told him; which made me laugh heartily all the Way."

By the side of this narrative Carreri presents a copper plate illustration of the platform at Persepolis, showing the columns of the palace still standing in front of the mountain. Above this picture are two lines of inscription as follows:

[Reproduced in the same size as the copy given in Churchill's republication of Carreri's narrative.[1]]

[1] *A Collection of Voyages and Travels* [Churchill's]. Vol. iv. London,

It is evidently the purpose of Carreri to leave upon the reader's mind the impression that he had copied these characters himself. This, however, is certainly not true. A slight examination and comparison reveal the fact that these two lines are made up out of the three lines of Herbert, with but slight changes. Here, then, is a clear case of deception proved at once upon the Neapolitan. He has borrowed, and that rather stupidly, from his English predecessor. In this matter, at least, he has made no contribution to the search for facts about records at Persepolis. To make the matter rather worse, the picture of the platform at Persepolis, which he gives beneath his plate of inscriptions, is also borrowed without acknowledgment. It had already appeared in Daulier-Deslandes.[1]

His punishment has been severe. It has even been this, that men have been moved to say that Carreri copied much more than the plate of inscriptions and the Plan of Persepolis; that he copied, indeed, everything in his book, and had never been absent from Naples at all, nor had seen anything which he describes. This is, however, an excess of skepticism. He doubtless bor-

MDCCIV. Containing pp. 1–606. *A Voyage round the World.* By Dr. John Francis Gemelli-Carreri. . . . Translated from the Italian, pp. 172, 174. Plate p. 175. The plate is better reproduced in *Voyage du Tour du Monde Traduit de l'Italien de Gemelli Careri,* par M. L. N. Paris, MDCCXXVII. P. 246. Should be p. 402. The pagination is incorrect.

[1] *Les Beautez de la Perse* . . . par le Sieur A. D. D. V. (*Andraé Daulier Des Lands Vardomois.*) Paris, M.DC.LXXIII.

rowed much from his predecessors, a common habit then, and not altogether unknown among travelers even now, but there is really no reason to believe that the whole of Carreri's narrative was fictitious.

But that question aside, the book of Carreri is of importance in the history of decipherment; not indeed that his copy or his description was of any practical use, but because his book was widely read in Europe, and had its share in keeping alive the interest in Persepolis and in stimulating more. And that was no mean service.

The slow assaults upon these inscriptions at Persepolis were now becoming international. The Spanish, Italians, English, and French had all made their observations. It was now in order that a German, Engelrecht Kaempfer, should make his contribution to the unraveling of the mystery. Kaempfer was a physician, born and trained in Germany, but largely become a Hollander by residence and service. He had already made important contributions to science through long residence in Japan, where he had studied the botany[1] and then the manners, customs, and the history of that then unknown land. From the mystery of Japan he turned to the mystery of Persia, and not knowing exactly what he did, copied again the little three-line inscription which Chardin had already prepared for publication. That would have been no new con-

[1] The Iris Kaempferi is thus named in his honor.

tribution to the work had he gone no further, but he made a gain by publishing for the first time a long inscription, which was not in old Persian at all, but in Assyro-Babylonian.[1] The difference between the two inscriptions he does not appear to have noticed, and he certainly did not know in what language or languages these texts might be written. The longer inscription appears to have interested him most, and upon this he made some observations which sprang naturally out of his former studies in Chinese and Japanese. His question was in simplest form this: Have we in these strange-looking inscriptions a language written in alphabetic, in syllabic, or in ideographic characters? Or, in another form; do these little wedge-shaped signs represent in each case a letter, a syllable, or a word? His decision was that the signs were ideographic, each of them representing an idea or a word. If he had reference in this judgment only to his longer inscription, and not to the smaller one at all, his decision was correct, and may very possibly have influenced those who

[1] Kaempfer's important investigations are published in his great book *Amoenitatum exoticarum politico-physico-medicarum, fasciculi v, quibus continenter variae relationes, observationes & descriptiones rerum Persicasum & ulterioris Asiae, multa attentione, in peregrinationibus per universum Orientem, coloectae ab auctore Engelberto Kaempfero.* D. Lemgoviae, 1712. Quart. Booth (*The Discovery and Decipherment of the Trilingual Cuneiform Inscriptions*, p. 70) says of Kaempfer: "It is to him we owe the designation of 'cuneiform' from the wedge-like appearance of the signs that compose the groups—a name they have since retained." But the name had been used by Hyde twelve years earlier. See the reference on p. 100 below.

came after him to a proper decision at the beginning of their researches.

Kaempfer spent the later days of his life in the Netherlands. His work might almost entirely be claimed as Holland's contribution to this international enterprise if there were any need so to do. But Holland was now to make its own direct contribution through one of its own sons, Cornelis de Bruin, who visited the ruins in 1704, and also copied inscriptions there. Ten years later an account of his travels over Moscovia, Persia, and India was published in sumptuous style in Amsterdam. In this new work there were reproduced two inscriptions in a threefold form. In reality the threefold form was later discovered to be three languages, but Bruin believed that he had really published six inscriptions, and not merely two inscriptions repeated in three languages. Bruin reproduced two other inscriptions, each in a single language. In one respect he made a great historical advance over Chardin. He argued that the palaces at Persepolis could only have been erected by the Achæmenian kings and to be those which had been destroyed by Alexander the Great. In this, later investigation confirmed his argument, and the correct determination of the dynasty which had built these monuments was of first rate importance at the very beginning of the process of decipherment of the inscriptions, as will shortly appear. Bruin's book was first pub-

lished in Dutch,[1] but afterward appeared in French.[2] Its influence upon the progress of these studies was surprisingly small. The very costliness of its magnificent original publication might have made it accessible to few, and in this there is possibly some explanation of its slight influence. But the French edition, in a language more extensively used, and in a form more simple, must have had a considerable circulation. Yet even from this there came no impulse. Europe looked idly over the plates in which these strange characters appeared and apparently made no attempt to get at their secret. They were still matters of curiosity, but their publication at all was an achievement which could not be permanently fruitless. The restless spirit of man would be in pursuit of them shortly, and then each line published by one traveler after another would be eagerly scanned, and every single suggestion or hint weighed and considered. Other travelers planning to visit these same lands in the age before guidebooks, would read the accounts of their predecessors, and, inspired by them, would go to see the same ruins and to bring back more complete copies of

[1] *Cornelis de Bruins Reizen over Moskovie, door Persie en Indie.* t'Amsteldam, 1714. Folio. Between pages 216 and 217 are magnificent copperplate views of the ruins at Persepolis, and between 217 and 218 are the copies of the inscriptions, numbered 131, 134.

[2] *Voyages de Corneille le Brun par la Moscovie, en Perse, et aux Indes Orientales*, 2 tom. à Amsterdam, 1718. The plates in this edition are inserted in vol. ii, between pages 270 and 271, and between 272 and 273.

these little inscriptions. In this was the chief hope for the future. All the copies which were yet made were too brief to offer a good chance for translation, or even decipherment. They were, furthermore, inaccurate in very important matters. There could be no hope of a successful decipherment until the quiet scholar in his library had copies in which every line, every wedge, every little corner, was accurately reproduced. The improvement in this respect had thus far not been great. The gain had been chiefly in the number of texts offered. If the proposition made by the Royal Society of London, when Mr. Flower's copies were first presented, in 1693, had been followed, and a complete copy made of all these inscriptions by a competent hand, the attempts to decipher would have undoubtedly begun much earlier than they did.

In this story of a slow-moving effort at decipherment the small must find its mention along with the great; and there is need to turn for a moment from Persepolis to mention the publication made in 1762 of a beautiful vase.[1] Upon this was inscribed at the upper part one long line of cuneiform characters, followed by a shorter line of the same. By the side of this shorter line were some hieroglyphic characters. Like the publications which preceded it, this also failed of any influence upon the progress of re-

[1] *Recueil d'Antiquités. . . .* tom. cinquième, planche xxx. Paris, 1762.

search at this time. The hieroglyphic signs were not yet deciphered, for the Rosetta stone had not yet been found by Napoleon's soldiers as they threw up their breastworks. If the Egyptian could have then been read, men would certainly have seized upon this little vase as containing a clue to the decipherment of the cuneiform characters. It would then have appeared as a bilingual text, in which the Egyptian formed one part and the cuneiform the other. By this means Egyptian would have become the mother study for Assyrian. Later this vase played a part both in Egyptian and in Assyrian studies, and then it became known that, like the monuments at Persepolis, the two lines of cuneiform texts were in reality written in *three* separate languages. The publication of the inscriptions on the vase was made by the French. So were the European nations, one by one, giving their share of time and labor to the international work. The greater ones among them had now done something, the smaller had yet hardly begun. One of these, the people of Denmark, was now to begin making contributions of great importance which should carry the investigations far beyond anything that had yet been attained. In the month of March, 1765, the ruins of Persepolis were visited by Carsten Niebuhr. He, like some of his predecessors, had had long experience of travel, and, unlike the others, was a man of exact and methodical habits

of work. He had, furthermore, prepared for just this work by a perusal of Bruin and Chardin, and apparently, also, even by the reading of Pietro delle Valle. The references which he gives to the two former show the continuity of study and indicate afresh how much these early voyagers had really accomplished, even when their work appeared to count for little at the time. Niebuhr's description of the ruins of Persepolis makes careful note of the changes which had come to the ruins by the ravages of time and the hand of man since Bruin had seen them, and then hurries on the real matter which most concerned him. His distinguished son has thus set forth the enthusiasm and the methods of Niebuhr in these researches:

"These ruins, inscriptions, and bas-reliefs had been sufficiently well represented by three former travelers to arouse the attention of Niebuhr as the most important monument of the East. The number of inscriptions and sculptures made him hope that an interpreter might be found who, by comparing them, would be able to understand them, if once correct copies of them were placed before him; and Niebuhr's keen eye told him how insufficient the drawings hitherto published were. Nothing out of all that he saw in Asia attracted him so powerfully in anticipation; he could not rest until he had reached Persepolis, and the last night saw him sleepless. The remembrance of these ruins remained ineffaceable

all his life long; they were for him the gem of all that he had viewed.[1]

"Three weeks and a half he remained beneath them, in the midst of a wilderness; and during this time he worked without interruption at the measurement and drawing of the ruins. The inscriptions are placed high up on the walls, and were clearly to be distinguished only when the sun shone upon them; as in this atmosphere the hard, originally polished marble is not weather-worn, his eyes, already affected by the uninterrupted work, were dangerously inflamed; and this, as well as the death of his Armenian servant, obliged him, much against his will, to leave the old Persian sanctuary before he had completed his drawings."

It would seem from this that it was the design of Niebuhr to copy every inscription which he could find at Persepolis. That would have been a great task indeed. Even without this completeness he achieved a result attained by no one who had preceded him. He republished several of the texts which Bruin and Kaempfer had published before him, but in a form far excelling them for accuracy. To these he added four texts which had not before appeared in any work. But Niebuhr made other contributions besides merely reporting the state of the ruins

[1] "They say that Carl Niebuhr, the traveler, when old and blind, used to lie and dream over the old Eastern landscape and night skies in his darkened life,—a perpetual world of enchantment to console him." (Life of Professor Cowell, p. 318.)

and giving copies of the inscriptions. His long journeyings ended in Denmark on November 20, 1767. A certain amount of leisure was now secured, and while writing the narrative of his travels[1] for the press he went over these little inscriptions and made some discoveries concerning them. It was, in the first place, clear to him that the conjectures of earlier students, that this writing was to be read from left to right, were correct. That was a good point of approach, and with that in mind he compared all his copies and soon determined that in them there were really three separate systems of writing. These three systems were always kept distinct in the inscriptions. In one of them the little wedges were not so complex in their combinations, in the second the complexity had somewhat increased, while in the third it had become much greater. He did not, however, come to what now seems a natural conclusion, that three languages were here represented. He held rather to the view that the proud builders of Persepolis had carved their inscriptions in a threefold form, the same words being written in more complicated characters. Having come thus far, he made still another step in advance. He divided these little inscriptions into three distinct classes, according to the manner of their writing, calling

[1] Carsten Niebuhr, *Reisebeschreibung nach Arabien und andern umliegenden Ländern.* Kopenhagen, 1774–1837, 3 vols. The description of Persepolis is in vol. ii.

them Class I, II, and III. He then arranged all those, which he had copied, that belonged to Class I, and by careful comparison decided that in them there were employed altogether but forty-two (42) signs. These he copied out and set in order in one of his plates.[1] This list of signs was so nearly complete and accurate that later study has made but slight changes in it. When Niebuhr had made his list of signs he naturally enough decided that this language, whatever it might be, was written in alphabetic characters. This much was finally determined, and future investigation would not overthrow it. Far beyond all his predecessors had Niebuhr gone. It is a pity that he was not able to go still further and essay the decipherment of one of these little inscriptions of the first class. For this, however, he did not possess the requisite linguistic genius, nor had he at command the various historical data necessary for its solution. He had given the world the material in a new and substantially correct form, and he had pointed out the proper place to begin; the rest must be left for another.

The next move forward was made by an Englishman, James Justinian Morier, whose family, both before and after his day, was distinguished in diplomatic annals, while he was also famous as a novelist[2] and traveler. He was born at

[1] *Ibid.*, vol. ii, plate xxiii, between pp. 132 and 133.

[2] His best as well as his most popular novel, "*The Adventures of Hajji Baba of Ispahan*" (1824), went to several editions and became, through its humor and insight into Oriental life and thought, a sort of Gil Blas.

Smyrna, about 1780, and educated at Harrow, whence he went to Constantinople to join his father, Isaac Morier, who was then British consul and agent of the East India Company. In 1807 he entered the British diplomatic service, and went to Persia as private secretary in the embassy of Sir Harford Jones. In 1808 he was appointed secretary of the legation at Teheran, but was sent home, probably with dispatches, passing overland to Constantinople and reaching England near the end of 1809. His account[1] of this journey was a classic of travel in its day and was translated into French and German. On his way he visited Nakshi-i Rustam and Persepolis, with the works of Chardin and Le Brun in his hand, expecting to correct them in detail by a personal examination of the ruins. His two days' sojourn was insufficient for this purpose, and he had to content himself with a general description, interesting and clearly written, and illustrated with clever sketches of his own.[2]

Morier made an important contribution to the progress of knowledge when he had advanced to Pasargadæ, some forty miles, as he supposed, beyond Persepolis. Here, two miles from Murgab, he came upon "collective ruins, called by the people of the country Mesjid Madre Sulei-

[1] Morier, J. J. *Journey through Persia, Armenia, and Asia Minor to Constantinople in the years* 1808, 1809, London, 1812.

[2] His beautifully drawn picture of the tomb of Cyrus surpassed any of his predecessors, and long remained the best. It is sad to compare it with recent photographs and to observe the progress of decay.

man, the tomb of the mother of Suleiman."[1] Here his attention was first caught by three pilasters, on which he found inscribed characters, which he copied excellently well,[2] which later investigation would show to be the simple words:

I AM CYRUS, KING OF THE ACHAEMENIDES.

Beyond these he saw two buildings, which at first "appeared scarcely worthy of notice, but which, on a nearer inspection, proved full of interest." The first proved to be Mohammedan and bore an Arabic inscription. The second aroused deep interest in him, and he goes on to speak of it in these words:

"The other is a building of a form so extraordinary that the people of the country often call it the court of the *deevis*, or devil. It rests upon a square base of large blocks of marble, which rise in seven layers pyramidically. It is in form a parallelogram; the lowest range of the foundation is forty-three by thirty-seven feet, and the edifice itself, which crowns the summit, diminishes to twenty-one by sixteen feet five inches." He rejects the idea that it is the tomb of Solomon's mother, saying quite simply, "in Eastern story almost everything wonderful is attached to the Solomon of Scripture." He then

[1] *Op. cit.*, p. 144. The words mean, of course, the *Mosque* of Solomon's mother. The word for grave would be Kabr, which appears, however, also to be applied by the natives to the monument.

[2] *Op. cit.*, plate facing p. 357.

goes on to say: "If the position of the place had corresponded with the site of Passargadæ as well as the form of this structure accords with the description of the tomb of Cyrus near that city I should have been tempted to assign to the present building so illustrious an origin." The tomb has indeed been visited before both by Barbaro and by Mandelslo, but neither had the combination of knowledge and imagination which enabled Morier correctly to divine its real origin. This identification proved of immense importance later, for it helped in the finding of the name of Cyrus by Grotefend upon the Persepolis inscriptions, which had been brought from that immediate vicinity, for it was natural to suppose that if this were really the tomb of Cyrus a text found near it might presumably contain his name.

Morier made a second visit to Murgab in 1811 as a member of the embassy of Sir Gore Ouseley. In the company was the ambassador's brother, Sir William Ouseley, a learned Persian scholar, who wrote an account of the journey, which lacked the popularity of Morier's work. On this journey Morier made no reference to his conjecture that the Mesjid Madre Suleiman was the tomb of Cyrus, nor did he make much additional contribution to the study of Persepolis. He was much impressed by the great heat of July, recording that: "Since the middle of June we remarked that at about two

o'clock P. M. Fahrenheit's thermometer was scarcely ever under 100°. On the 7th of July it was 105½° in my tent, on the 8th at 108°, and on the 9th at 110°." The one blot upon his creditable record is found in these words: "I went early in the morning to the ruins, which were situated about a mile from my habitation, attended by the stone cutters. Considering the quantity of sculptured remains that had fallen from their original positions, and which were spread about the ruins in great profusion, I did not hesitate to appropriate such parts of them as seemed the most fitting to be sent to England."[1] He gives as a frontispiece a beautiful engraving of one of these fragments, and the account which follows, of cutting and breaking seems little short of vandalism. So have perished many of the greatest memorials of the past all over the mysterious East.

The publication of Morier's travels was shortly followed by Sir William Ouseley's,[2] which car-

[1] James Morier, *A Second Journey through Persia, Armenia, and Asia Minor to Constantinople between the years 1810 and 1816.* London, 1818, p. 75.

[2] Sir William Ouseley, Kt., *Travels in various countries of the East; more particularly Persia.* London, vol. i, 1819. Vol. ii, 1821; vol. iii, 1823. Sir William was born in Monmouthshire in 1767 of an Irish family, which produced a goodly number of distinguished men. His son, Sir William Gore Ouseley, was in the diplomatic service and was for seven years in Washington as attaché of the British legation. While there he wrote a book entitled "*Remarks on the Statistics and Political Institutions of the United States, with some observations on the Ecclesiastical System of America, her Sources of Revenue, &c.*" This book was issued in Philadelphia under the auspices of Washington Irving, and gave a "highly favourable view of American institutions." One of the cousins of the first Sir William was Gideon Ouseley (1762–1839), a Methodist

ried yet a little further the process of investigation. He made, for the first time, an accurate copy of the cuneiform inscription around the window frames of Darius, which was often repeated, and pieced together by him after a collation of all the places in which it appeared.[1] He saw that it was to be read from bottom to top on the left hand side, and from top to bottom on the right hand side, and was sure that the language was to be read from left to right on the top line. He also discerned the difference in the style of writing in the three parts, and added the conjecture, "It is possible that each may differ from the others in dialect."

For materials such as Niebuhr, Morier, and Ouseley had furnished the learned world had been waiting. The words of Bruin and Chardin had awakened no scholar to attempts to decipher the texts which they had copied, simply because so little had been offered by them. Soon after the richer store of Niebuhr had been published, two scholars were at work seriously attempting to decipher these texts. The first was Olav Gerhard Tychsen, professor of Oriental languages in the University of Rostock, in Germany; the other was Friedrich Münter, the Danish academician of Copenhagen. Tychsen

preacher, sent by the Irish Conference to preach to the Irish-speaking population.

[1] *Op. cit.*, Plates 41 and 47. The former appears in vol. ii at p. 531, the latter (at p. 256) contains some of the characters in full size of the original and most beautifully copied.

made a very important discovery in the beginning of his researches, that remained to guide future workers. He observed that there occurred at irregular intervals in the inscriptions of the first class a wedge that pointed neither directly to the right nor downward, but inclined diagonally. This wedge Tychsen suggested was the dividing sign used to separate words.[1] This very simple discovery later became of very great importance in the hands of Münter. Of more general importance was his statement that "all the inscriptions of Niebuhr, with a single exception, are trilingual."[2] In that sentence spoke a linguist; the previous workers had been travelers, men of science, men of skill. The matter was now in the hands of men accustomed to deal with languages, and the promise of ultimate success was yearly growing brighter. The rest of Tychsen's work was not of enduring character. He argued wrongly as to the age of the buildings at Persepolis, and reached the erroneous conclusion that these inscriptions had been written during the Parthian dynasty (246 B. C. —227 A. D.). This error in history vitiated his promising attempt at the decipherment of one small inscription which had been found above the figure of a king. He rendered it thus:

"This is the king, this is Arsaces the great, this is Arsaces, this is Arsaces, the perfect and

[1] *De cuneatis inscriptionibus Persepolitanis lucubratio.* Rostochii, 1798, p. 24.

[2] *Ibid.*, p. 5.

the king, this is Arsaces the divine, the pious, the admirable hero."[1]

But a later investigator was to show that this was not an inscription of Arsaces at all, and that scarcely a word of it had been correctly rendered. This statement makes the work of Tychsen appear almost abortive, but such a judgment would not be just. He had indeed failed in the greater effort, but in making that he had, nevertheless, gained several smaller steps, and at the place thus attained another might begin and travel farther.

Münter was more fortunate than Tychsen in his historic researches, and that made him also more successful in his linguistic attempts. He rightly identified the builders of Persepolis with the Achæmenides, and so located in time the authors of the inscriptions. This was great gain, the full force of which he was not able to appreciate nor to utilize. He also agreed with the judgment of the former workers that the texts were to be read from left to right, and was beyond them in his full recognition of three languages, of which the last two were translations of the first. Independently of Tychsen, he recognized the oblique wedge as the divider between words, and was able to go far beyond this, even to the recognizing of the vowel "a" and the consonant "b." This was the first sure step in the decipherment. From our present point of view

[1] *Ibid.*, p. 29.

it may sound small, but it is to be remembered that it was made without the assistance of any bilingual text, but was rather taken bodily out of the darkness and gloom which had settled over this language centuries before. It was an achievement far exceeding that of the decipherment of the Egyptian hieroglyphics, which was secured by the aid of a bilingual text containing Greek. The name of Münter may well be held in honor among all who covet knowledge of the past of the Orient.

With the material which Münter had it would have been difficult to go further, but events were now to make accessible to another man of genius, adapted to such work, new material which would greatly simplify the labor of decipherment. This new material did not directly concern the inscriptions of Persepolis, but did cast welcome light upon them. It is connected with three great names in the annals of Oriental studies, and romantic in its personal as in its scientific connections.

In the year 1731 there was born at Paris a boy whose parents gave him the name of Abraham Hyacinthe Anquetil-Duperron, and destined him to the priesthood. In the seminary studies, carried on for this purpose, the young man learned Hebrew, and that introduced him to the fascination of the Oriental world, as it has many another since his day. His soul forgot its dedication to the priesthood and became absorbed in Oriental study at the Royal Library of Paris.

Here he attracted the notice of Abbé Sallier, who secured for him a small stipend as a student of Arabic and Persian. In that treasure-house of human knowledge there fell into his hands a few leaves of an Oriental manuscript, in which were written words sacred in the religion of Zoroaster. The language best known as Avestan, but long erroneously called Zend, he could not read, and his soul burned with longing to learn what these strange characters should be, and what the language which they expressed. He determined, even in his hopeless poverty, to get out to India, there to learn from the priests of Zoroastrianism the language of their sacred books. The times were troubled; war was likely at any time to begin between France and England in India, and even now French troops were about to be dispatched thither. With these lay his only hope of reaching the land of his dreams. He enlisted as a common soldier, but before he had sailed from L'Orient his friends had appealed to the minister, who gave him a discharge, provided free passage, with a seat at the captain's table, and ordered a salary paid him on arrival at his destination. He landed, on the 10th of August, 1755, at Pondicherry, and waited a short time to study modern Persian, and later at Chandernagore to study Sanskrit. When the war broke out between France and England he suffered terrible privations. At last his reward came at Surat, where he ingratiated himself with the priests and

acquired enough knowledge of the language to translate the dictionary Vendidad-Sadé and other works. In May, 1762, he arrived at Paris, poor and exhausted, but laden with Oriental manuscripts to the number of one hundred and eighty. Out of this store he published, in 1771, the Zend-Avesta, which brought to Europe its first sight of the sacred books of the followers of Zoroaster. This publication was of immense value to the study of religion and of history, but it was now destined to exert another potent influence. The linguistic collections of Anquetil-Duperron were organized and systematized by Eugène Burnouf, and it was this fact that was to have an important bearing upon the study of the inscriptions of Persepolis.

After Anquetil-Duperron and Eugène Burnouf there is to be added the name of Silvestre de Sacy, the greatest Arabic scholar of his age, as one who, without intending so to do, cast a valuable side light upon Persepolitan research.

In Persia travelers had long been noticing inscriptions written during the Sassanian period in the Pehlevi character (227–641 A. D.). In the years 1787–1791 Silvestre de Sacy, who was later to lay the foundations of Arabic philology on which its present structure is still standing, began the decipherment of these inscriptions, and soon conquered their mystery sufficiently to gain at least their general sense.[1] He found that they

[1] A. I. Silvestre de Sacy, *Mémoires sur diverses antiquités de la Perse,*

had a stereotyped form from which there was scarcely ever a departure, and that they run about in this style:

"N., the great king, the king of kings, the king of Iran and Aniran, son of N., the great king, etc."

That discovery had its own importance in its own field, but, like the work of Duperron and Burnouf, it was now to be applied to other uses by a man whose aim was to decipher much older inscriptions.

If now we look back over this long story, reaching from the earlier part of the fourteenth century down to the very beginning of the nineteenth, and gather up the loose threads of our story, we shall be the better able to understand the method and the results which were now to be revealed.

Out of Persepolis, by the combined efforts of a long line of travelers, Italian, Spanish, Dutch, German, English, Danish, and Portuguese, there had been brought to Europe copies of some little inscriptions written in cuneiform characters. It had already been learned concerning them that they belonged to the age of the Achæmenides, that they were written in three languages, of which the first was ancient Persian, that this ancient Persian was almost, if not quite wholly, an alphabetic language, with possibly some syllabic signs, and that of these alphabetic signs

et sur les médailles des rois de la dynastie des Sassanides; suivis de l'histoire de cette dynastie, traduite du Persan de Mirkhond. Paris, 1793.

two, namely, "a" and "b," were almost certainly made out, while of some others possible or even probable meanings were suggested. To this were now to be added two valuable side lights. The decipherment of the Avestan language had supplied the grammatical structure and much of the vocabulary of a language spoken over the very same territory as that in which Persian had formerly held dominion. It was exceedingly probable that it had taken up many words, with some changes, from the more ancient tongue which scholars were now trying to decipher. It was likely, also, to represent in its grammatical structure, in its declensions or conjugations, some reminiscence of old Persian. In grammar, syntax, or lexicon of Avestan there was a good hope of finding something that might be made useful to the decipherer. Some of this material was accessible to Tychsen and to Münter, but they had not known how to use it with best effect. There is a gift for deciphering, as there is a gift of tongues. But not only from this work of Duperron and Burnouf was there new material; valuable hints might be had from the discoveries of de Sacy concerning the inscriptions of Sassanian kings. The style in which the Sassanian kings wrote their inscriptions was very probably copied from the style in which the older Achæmenides had written. That was not certain, but as a hypothesis upon which to work it might prove useful.

In this we have shown what the material was, what the problem, and what the essays made for its solution, and now there was a call for a man able to practice a method by which all that existed of fact or of hypothesis could be brought to bear, and the successful result be achieved. But even while the preliminary work was going on the genius who should achieve the result was preparing.

G. F. Grotefend.

Georg Friedrich Grotefend

Philologian and Decipherer

Born in Münden, Germany, June 9, 1775, studied in Göttingen, taught there in the Gymnasium until 1806, when he went to a similar post in Frankfort on the Main, and from 1821 to 1847 was Director of the Lyceum in Hanover, where he died December 15, 1853. Apart from his distinguished contributions to Persian decipherment he was chiefly known as a successful teacher of the classics.

CHAPTER II

GROTEFEND AND RAWLINSON

It were difficult, if not impossible, to define the qualities of mind which must inhere in the decipherer of a forgotten language. He is not necessarily a great scholar, though great scholars have been successful decipherers. He may know but little of the languages that are cognate with the one whose secrets he is trying to unravel. He may indeed know nothing of them, as has several times been the case. But the patience, the persistence, the power of combination, the divine gift of insight, the historical sense, the feeling for archæological indications, these must be present, and all these were present in the extraordinary man who now attacked the problem that had baffled so many.

On June 9, 1775, Georg Friedrich Grotefend was born at Münden, in Hanover, Germany. He was destined to become a classical philologist, and for this purpose studied first at Ilfeld and later at the University of Göttingen. Here he attracted much attention, not only as a classical scholar of promise, but also as an ingenious man with a passion for the unraveling of difficult and recondite questions. He formed the friendship in Göttingen of Heyne, Tychsen, and Heeren.

On the recommendation of the first named, he was appointed in 1797 to an assistant mastership in the Göttingen Gymnasium. Two years later appeared his first work, which brought him reputation and a superior post in the Gymnasium at Frankfort-on-the-Main. Up to this time he had given no attention to the study of Oriental languages. But in 1802 his friend, the librarian Fiorillo, drew the attention of Grotefend to the inscriptions from Persepolis, and placed in his hands all the literature which had hitherto appeared.

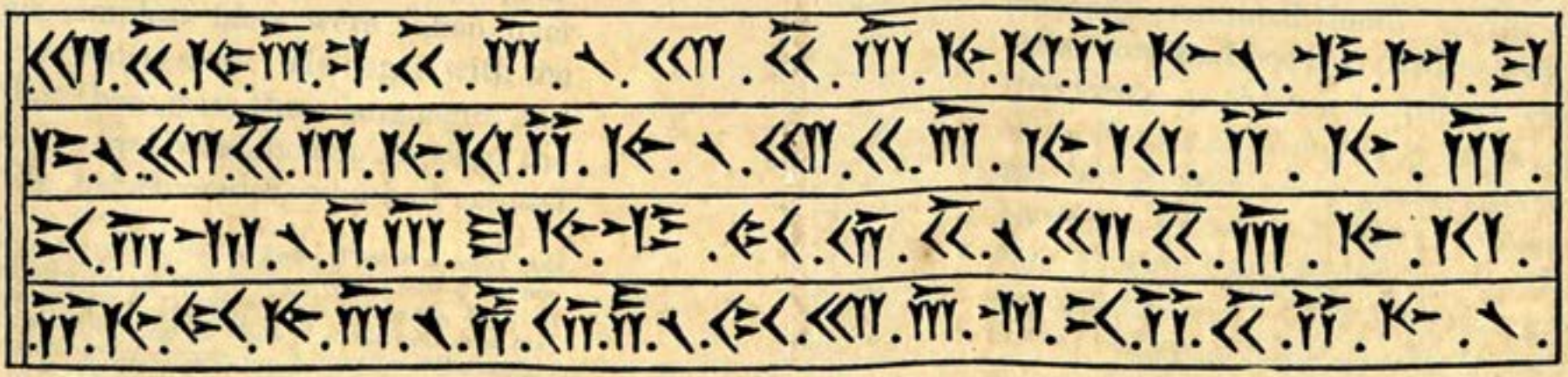
Grotefend was at once enlisted, and, though he had no Oriental learning, set himself to the work, probably little dreaming of how many years of his life would be spent upon these little inscriptions or upon the work which grew out of them. His method was exceedingly simple,[1] and may be made perfectly clear without the possession of any linguistic knowledge. His fundamental principles and his simplest facts were taken over bodily from his predecessors. He began with the assumption that there were three languages, and that of these the first was ancient Persian, the language of the Achæmenides, who had erected

[1] Grotefend's first paper was written in Latin (*Praevia cuneatis, quas vocant inscriptionibus persepolitanis legendis et explicandis relatio*) and presented by a friend to the Göttingen Academy September 4, 1802. It was followed by others on October 2, November 13, 1802, and May 20, 1803. None of these were published by the society. The original papers were found by Professor Wilhelm Meyer, of Göttingen, in the society's archives and published in the *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen*, 1893, No. 14.

I.

*Niebuhr Tab. 24. B.

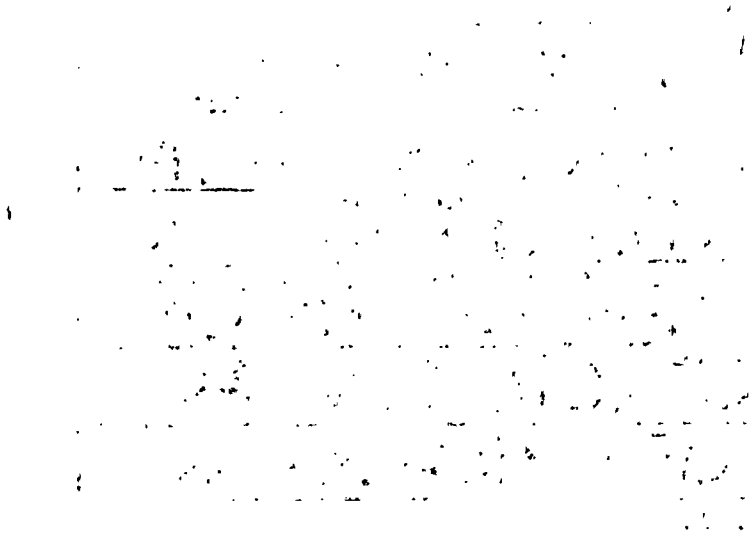
II.



*Niebuhr Tab. xxiv. G.

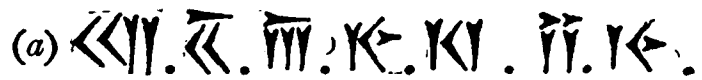
INSCRIPTIONS DECIPHERED BY GROTEFEND

*From Niebuhr. *Reisebeschreibung nach Arabien und andern umliegenden Ländern.* Kopenhagen, 1774–1834, Band II, p. 134. Tab. XXIV

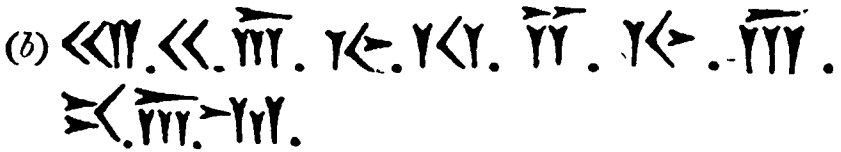


these palaces and caused these inscriptions to be written. For his first attempts at decipherment he chose two of these old Persian inscriptions and laid them side by side. The ones which were chosen were neither too long nor too short; the frequent recurrence of the same signs in them seemed to indicate that their contents were similar, and finally they were clearly and apparently accurately copied by Niebuhr. The inscriptions thus selected were those numbered "B" and "G" by Niebuhr (see plate), which, for the purpose of this exposition, may be designated simply as first and second (I and II). Following Tychsen and Münter, he held that these inscriptions, which accompanied figures of kings, were the titles of these monarchs, and were presumably similar to the inscriptions of Sassanian kings which de Sacy had just deciphered. Grotefend placed these two inscriptions side by side and carefully examined them. In the work of Münter a word had been pointed out which appeared frequently in these inscriptions, sometimes in a short form and sometimes longer, as though in the latter case some grammatical termination had been added to it. In these two inscriptions this word appeared both in the shorter and in the longer form. Grotefend was persuaded that this word meant king, as Münter had discovered, and that when it appeared twice in each of these texts in exactly the same place, first the shorter and then the longer form, the expression meant

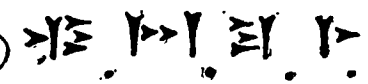
"king of kings." A glance at the plate will show that in these two inscriptions, in the second line, after the first word divider, appear the two sets of signs exactly alike, thus:

(*a*) 

this is followed by the same word, but much increased in length, thus:

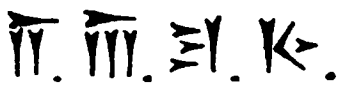
(*b*) 

The supposition was that (*a*) meant *king*, while (*b*) was the plural and meant *kings*, the whole expression signifying *king of kings*. But further this same word, supposed to be king, occurred again in both inscriptions, namely, in the first line, and in both instances it was followed by the same word, namely:

(*c*) 

Here, then, was another expression containing the word king. What could it mean? Grotefend looked over de Sacy's translations of Sassanian inscriptions and found that the expression "great king" occurred in them, and then made the conjecture that this was the same expression, and that (*c*) meant "great," hence "king great," that is, *great king*. All this looked plausible enough, but it was, after all, only conjecture. It

must all be supported by definite facts, and these words must each be separated into their alphabetic constituents and these understood, and supported by clear evidence, before anyone would or could believe in the decipherment. To this Grotefend now bent every energy. His method was as simple as before. He had made out to his own satisfaction the titles "great king, king of kings." Now, in the Sassanian inscriptions the first word was always the king's name, followed immediately by "great king, king of kings"; it was probably true in this case. But, if true, then these two inscriptions were set up by different kings, for the name in the first was:

(*d*) 

while in the other it was:

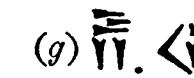
(*e*)

But to simplify, or to complicate the matter, as one will, this name with which I begins appear in II in the third line, but changed somewhat in its ending, so that it stands thus:

(*f*)

From its situation in the two places Grotefend concluded that (*d*) was the name in the nominative and (*f*) was the same name in the genitive. Thus I begins "*N. great king, king of kings*," and

this same king appears in II thus: "*of N.*" In number II this name was followed by the word for king, and after this another word which might mean "son," so that the whole phrase in II would be "*of N., king son,*" that is, "*son of N., king,*" the order of words being presumably different from that to which we are accustomed. But this same word, which is supposed to mean *son*, appears also in I, line five, thus:

(*g*) 

where it follows a name which does not possess the title king. From all these facts Grotefend surmised that in these two inscriptions he had the names of three rulers: (1) the grandfather, who had founded a dynasty, but did not possess the title of king; (2) the son, who succeeded him and bore the title of king; and (3) the grandson, who also had the same title. The next thing to do was to search through all the known names of the Achæmenides to find three names which should suit. The first names thought of were Cambyses, Cyrus, and Cambyses. These will, however, not do, because the name of the grandfather and grandson are exactly alike, whereas on the two inscriptions they are different. The next three to be considered are Hystaspes, Darius, Xerxes. If these be correct, then the seven signs with which I begins must be the name Darius (see *d* above). The next thing in order

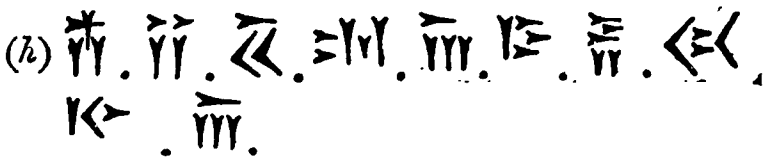
was to find the form of the name Darius in ancient Persian. Of course Grotefend did not expect to find it written in that way exactly, for the modern European spelling has come to us from the Greek, and the Greeks were not careful to reproduce exactly the names of other peoples who were, in their view, only barbarians. He ascertained from the Hebrew lexicon that the Hebrews pronounced the word Daryavesh, while Strabo in one passage, in trying to represent as accurately as possible the Persian form, gave it as Dareiaves. Neither of these would work very well into the seven characters, and on a venture Grotefend gave the word the form of Darheush and so the first word was thus to be set down

That seemed to fit well enough, and as later investigations have shown, it was almost wholly correct, there being only errors in H and E, which did not vitiate the process, nor interfere with carrying it out further. The next task was to make out the name at the beginning of II. This was comparatively easy, for nearly all these same letters were here again used, and only the first was wanting. It was easy to supply this from the Hebrew form of the name and also from the Avestan language so recently deciphered. This name was therefore read thus:

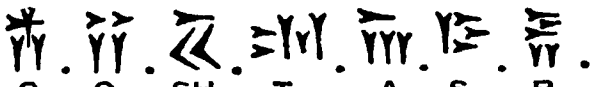
(e)
CH SH H A R SH A

The error in this also was exceedingly slight, when one considers the extreme difficulty of the task and the comparative bluntness of this tool of conjecture or surmise or, to put it boldly, guess. This name was supposed to be the Persian form for Xerxes.

The next thing in order was to find the letters for the third name, and that was a much more difficult problem. This was the name which appears in I, line four, last word, thus:

(h) 

Here were ten signs. Grotefend believed that this word was in the genitive case, and some signs at the end must be cut off as the genitive ending. But how many? That was the question. Perhaps the Avestan language (then called Zend) would help him. To the study of this he now had recourse, and after much doubt decided to cut off the last three as ending, and take what remained as the king's real name. The name which he was seeking, as we have already seen, was Hystaspes, the late Persian form of which Grotefend followed, and thus made out the name:

(*h*) 
G O SH T A S P

In this word, as in the other two, later discovery showed that he had made a mistake, but this time only in the first two characters, the correct form being Ui·I·Sha·Ta·Sa·Pa, the values being syllabic rather than alphabetic. To Grotefend's own mind the whole case seemed clear and indisputable, for the same characters occurred in all three names, and thus each supported the other. At this time the Persian alphabet was supposed to contain forty-two alphabetic characters, of which Grotefend believed that he had found thirteen. To this he soon added more, by a simple process of combination, using the word for the name of god in these texts, namely, Aurmazda.

He now felt himself able to translate these inscriptions in part, thus:

I. Darius, the mighty king, king of kings . . . son of Hystaspes.

II. Xerxes, the mighty king, king of kings . . . son of Darius, the king.

This was an epoch-making result, and even Grotefend, with all his enthusiasm and with all the confidence of genius, did not fully realize it. This much he was anxious to get before the learned world for acceptance, or perhaps for criticism. That should have been easy indeed, but, in fact, it was not easy. The Göttingen

Academy of Sciences refused absolutely to believe in his methods or his results, and would not take the risk of disgracing itself by publishing Grotefend's paper, describing his work, in its transactions.[1] He was not an Orientalist at all by training or experience, and the learned men of Göttingen who were Orientalists asked whether "any good thing could come out of Nazareth," that is, whether a man who was not an Orientalist could possibly offer a contribution of value to Oriental learning. The case was a sad one for the patient, plodding decipherer, for it was not easy to see how he could gain any publicity for his work. At this juncture a personal friend, A. H. L. Heeren, who was about to publish a book on the ancient world,[2] offered to give space in the appendix to Grotefend for the purpose of setting forth his theories and discoveries. Grotefend eagerly seized the oppor-

[1] This refusal is the more noticeable as the Academy had, in the very beginning, announced that Grotefend "had been led by certain historical presuppositions, and also by the analogy of the Sassanian inscriptions, to discover in the shorter cuneiform inscriptions of Persepolis, written in the first and simplest of the three forms of character, which he had examined with this purpose in view, the names and titles of Darius and Xerxes."—*Göttingische Gelehrte Anzeigen*, September 18, 1802 (No. 149).

[2] *Ideen über die Politik, den Verkehr und den Handel der vornehmsten Völker der alten Welt*, von A. H. L. Heeren. 3 vols. Göttingen, 1815. The paper by Grotefend is printed in vol. i, pp. 563, ff., under the title Ueber die Erklärung der Keilschriften, und besonders der Inschriften von Persepolis.

Heeren's book was translated into English with the title, *Historical Researches into the Politics, Intercourse, and Trade of the Principal Nations of Antiquity*, by A. H. L. Heeren. Oxford, 1833. In this edition Grotefend's essay appears in vol. ii, pp. 313, ff., accompanied by plates better executed than those of the German edition.

tunity, and there appeared his work. It met, on the whole, with a cold reception. Volney denounced it as resting on forms of names which were at least doubtful and might be incorrect, and with him joined many German voices. On the other hand, Anquetil-Duperron, now an aged man, waiting "with calmness the dissolution of his mortal frame," and the immortal de Sacy received it with enthusiasm and hailed it as the beginning of the sure reading of these inscriptions.

Those who doubted the whole scheme were later to receive a severe setback, and that from an unexpected source. It will be remembered that while the Persepolis inscriptions were still in the copying stage a beautiful vase had come to Paris which contained some Egyptian hieroglyphics, and also some signs like those found at Persepolis. After the publication of Grotefend's work in Heeren's book the Abbé Saint-Martin, in Paris, devoted much thought and time to its criticism and study. At this same time Champollion was engaged in the decipherment of the Egyptian hieroglyphics. He suggested to the abbé that they should try to decipher together the marks upon the vase. When this was attempted the abbé found that the name on the vase in cuneiform characters should be transliterated thus:

CH. SH. A. R. SH. A[1]

[1] *Nouvelles observations sur les inscriptions de Persepolis*, par M. Saint-

and this was remarkably confirmed by the finding of the same name, according to Champollion, in the Egyptian signs. This was a small matter in some ways, but it increased the faith of many in the method and results of Grotefend.

Meanwhile Grotefend himself was continuing his efforts to get beyond these few words and decipher a whole inscription. At this stage, however, entirely different traits of mind were needed, and a completely changed mental furnishing. In the preliminary work the type of mind which Grotefend possessed was admirably adapted to the work to be done. The mental training derived from long study of the classics of Greek and Latin was likewise of constant service. He had, however, now reached the point where extensive and definite knowledge of the Oriental languages was imperatively necessary. In order to secure words of ancient Persian he must know words in the related Oriental languages or in those other languages which, though not related, had been used in or about the same territory, and so might have borrowed words from old Persian. He must also know the Oriental spirit, have a feeling for Oriental life, be able to understand in advance just about what an Oriental was likely to say. None of these possessions were his. His later work was

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Martin. (*Mémoires de l'Académie Royale des Inscrip. et Belles-Lettres.* Tome xii, part 2, 1839, pp. 113, ff.) This paper was read before the Academy, December 20, 1822.

therefore largely abortive. He tried to translate entire inscriptions, and failed almost completely, though he devoted much time for all the rest of his life to this matter, without, however, abandoning his real field of classical literature.

The translations which he first made seem strange enough now, but perhaps the very first ought here to be recorded. He translated I (i. e., B) "Darius, the valiant king, the king of kings, the son of Hystaspes, the successor of the ruler of the World, in the constellation of Moro."[1] The correct translation of this, as we now know, is this: "Darius, the great king, king of kings, king of the lands, son of Hystaspis, the Achæmenian, who built this winter palace."[2] It may make the translation of Grotefend seem odd in sound, and strangely failing to get the real meaning of the little text, but one should rather observe how much he really did secure correctly. It would perhaps have been wiser, as we now see it, if he had not attempted to translate at all.

However unsuccessful the later efforts of Grotefend may have been, nothing can ever dim the luster of his fame as a decipherer. It was he who first learned how to read an ancient Persian word. From this, in due course, came

[1] Heeren, English translation, i, 126.

[2] The Persian word *takara* is of doubtful meaning. But Herzfeld (*Klio*, viii, p. 51) makes out a strong case for "winter palace." The corresponding Babylonian text says quite simply "this house," and I feel that this makes Herzfeld's argument rather doubtful.

the power to read the words of Babylonian and Assyrian. In other words, through the discoveries of Grotefend the world of ancient Persia was reopened, and men learned to read its ancient inscriptions. By them also the much greater worlds of Assyria and Babylonia were likewise rediscovered. Much of what we know of ancient Persia came from them; almost all that we know of Assyria and Babylonia was derived from them. To very few men, in all time, has it happened to make discoveries of such moment.

While he still lived and worked, others with better equipment in a knowledge of the Oriental languages took up his work. The first of these was a Dane by birth, Rasmus Christian Rask (1787–1832). He was distinguished as a comparative philologist in the Indo-European languages who had invaded with brilliant success the field of Oriental study. He had resided in Persia, where in six weeks he had learned enough Persian to converse freely. He had seen Persepolis and had lived in Teheran and in Shiraz, and was comfortably master of twenty-five languages and dialects. It was his good fortune to discover the plural ending in ancient Persian, which had baffled Grotefend. In the work of decipherment Grotefend never got so far as to determine all the characters in the phrase, king of kings, and this was now achieved by Rask,[1]

[1] R. Rask, *Ueber das Alter und die Echtheit der Zend Sprache und des*

who correctly apportioned the characters. The same ending appears also in another word after the word "king." Rask also for this suggested a very plausible rendering. In the Sassanian inscriptions the phrase is "king of lands"; why might not this be the same? That question would find its answer at a later day.

And now appeared a man to grapple with the problem of the inscriptions of Persepolis, who was in learning far better equipped than any who had preceded him. This was the French savant, Eugène Burnouf.[1] He had already gained fame as the man who had given the grammar of Avestan a scientific basis. He knew that language in all its intricacies. To this he added a knowledge of Persian life and religion in the period following that to which these inscriptions belonged. All this learning could be brought to bear upon these inscriptions, and Burnouf used it all as a master. He found in one of the little inscriptions which Niebuhr had copied at Naksh-i Rustam a list of names of countries. To this he gave close study, and by means of it accomplished almost at a stroke several distinct achievements. In the first place he found the equivalent for almost every character in the Persian alphabet or syllabary. In

Zend-Avesta und Herstellung des Zend-Alphabets nebst einer Uebersicht der gesammten Sprachstammes; uebersetzt von Fried. Heinrich von der Hagen. Berlin, 1826, p. 28.

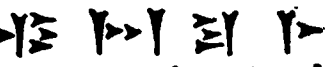
[1] *Mémoire sur deux inscriptions cunéiformes trouvées près d'Hamadan*, par M. Eugène Burnouf. Paris, 1836.

the next he determined finally that old Persian was not the same language as Avestan, but that it was closely related to it, and that therefore there was good hope that Avestan as well as certain Indo-European languages would contribute important light to the study of old Persian.

Before his own discoveries were made in full, and before their publication, Burnouf had called the attention of Lassen to this list of names. Induced by the remarks of Burnouf, Lassen made this same list of names the subject of investigation, and at about the same time as Burnouf published the results of his study, which were almost identical.[1] He had, however, made, in one respect at least, very definite progress over Burnouf. He discovered that, if the system of Grotefend were rigidly followed, and to every letter was given the exact equivalent which Grotefend had assigned, a good many words could not be read at all, while others would be left wholly or almost wholly without vowels. As instances of such words he mentioned ÇPRD, THTGUS, KTPTUK, FRAISJM. This situation led Lassen to a very important discovery, toward which his knowledge of the Sanskrit alphabet did much to bring him. He came, in one word, to the conlcusion that the ancient

[1] Some believe that Lassen borrowed these results from Burnouf's communications to him, and therefore count him dishonest in making no acknowledgment. There is however no reasonable excuse for casting this aspersion upon his memory. He and Burnouf remained in loyal friendship to the end of life.

Persian signs were not entirely alphabetic, but were, partially at least, syllabic, that is, that certain signs were used to represent not merely an alphabetic character like "b," but also a syllable such as "ba," "bi," "bu." He believed that he had successfully demonstrated that the sign for "a" (see second sign in "f," below) was used only at the beginning of a word, or before a consonant, or before another vowel, and that in every other case it was included in the consonant sign. For example, in inscription I the first word of the second line ought to be read thus:

(*c*) 

Va Za Ra Ka

while in inscription II the middle word in line three should be so read:

(*f*)

D A Ra Ya Va H U S

This discovery was of tremendous importance, and may be said to have completely revolutionized the study of these long puzzling texts. To it two other scholars made important contributions, the one being Beer, and the other Eugène Jacquet, a Parisian savant. The former, who lived only to the age of thirty-six, had proved that the character which Grotefend called H was really Y, and that the sign which he had thought to be A was rather to be read as the aspirate H.[1]

[1] *Hallesche Allgemeine Litteratur-Zeitung*, I, col. 1–47.

Curiously enough he was supported by Jacquet,[1] who quite independently secured the same result, and defended this and other suggestions by keen analysis and the most astonishing learning in one so young. He died at the early age of twenty-seven, leaving a moving tradition of linguistic genius behind him, which might have meant much to the new science.

This long line of successful decipherment had been carried on with only a small portion of the inscriptions of ancient Persia, that were still in existence. Other and better copies of the inscriptions were even at this time in Europe, but had not been published. In 1811 an English traveler, Claudius James Rich, had visited Persepolis and copied all the texts that were to be found, including those which Niebuhr and his predecessors had copied. These were discovered in the papers of Rich, and in 1839 were published, coming naturally at once into the hands of Lassen, who found in them much new material for the testing of his method and for the extension of the process of decipherment.

Still greater and more valuable material was placed in Lassen's hands through the travels of Westergaard, a Dane, who, in this, imitated worthily his fellow-countryman Niebuhr. Westergaard had again gone over the old ground at

[1] Examen critique de l'ouvrage intitulé: Die Altpersischen Keilinschriften von Persepolis, etc., von Chr. Lassen, suivi de nouvelles recherches, *Journal Asiatique*, tome V, pp. 351–376, 422–445, 544–604; tome VI, pp. 385–425.

Persepolis and had there recopied and carefully collated all the well-known inscriptions.[1] In this he had not done a useless task, for only by oft-repeated copying and comparing could the finally definite and perfect text be attained, without which the decipherment would always be subject to revision. But Westergaard went further than this; he visited at Naksh-i Rustam the tombs of the Persian kings, and there copied all the tomb inscriptions which were hitherto unknown. On his return this new material was also made accessible to Lassen, who was now fairly the leader in this work of decipherment. Lassen found that the new copies of the old texts were so important that he went over some of the ground afresh and found it useful to reedit some of his work which had before seemed final. The same material called a new worker into the field in the person of Holtzmann,[2] of Carlsruhe, in Germany, whose work, however, made no very deep impression on the general movement.

In the work of decipherment thus far the chief positions had been held by Grotefend and Burnouf, but for the maintaining of its international character the time was calling for workers from other lands. As it happened, at this very time an Englishman was at work on the same task,

[1] Lassen, *Die Alpersischen Keilinschriften nach Herrn N. L. Westergaard's Mittheilungen. Zeitschrift für die Kunde des Morgenlandes.* Band vi. Bonn, 1845. See especially pages 1–3.

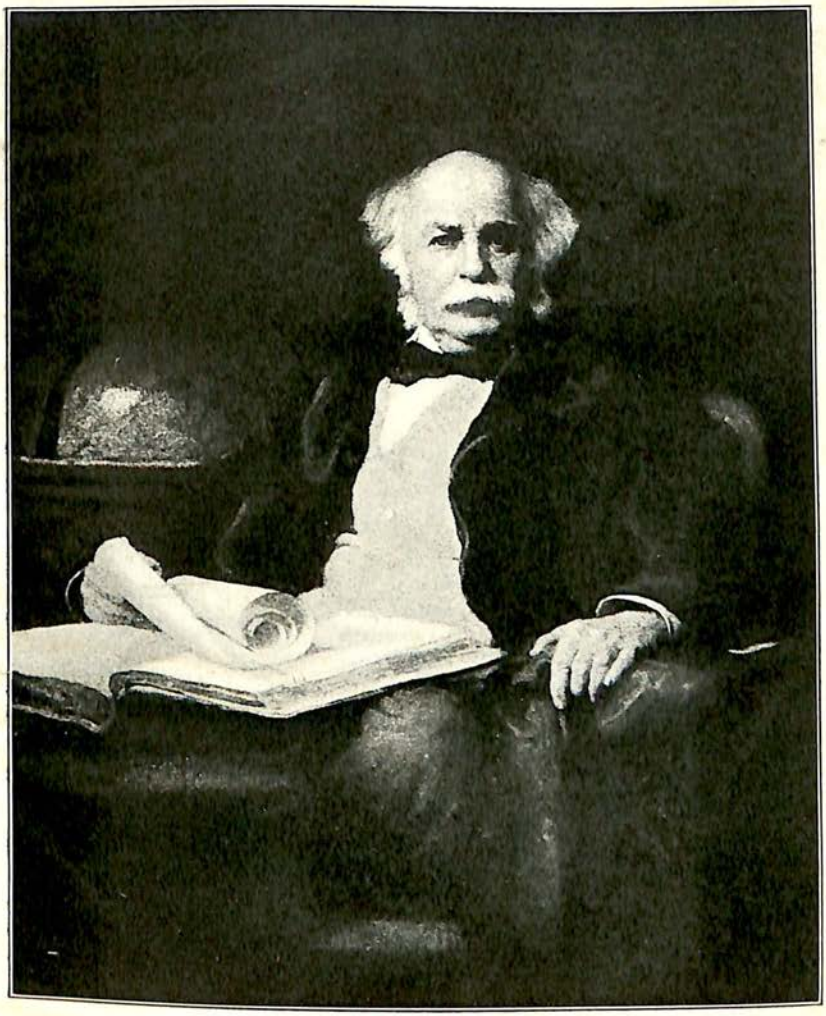
[2] *Beiträge zur Erklärung der Persischen Keilinschriften*, von Adolf Holtzmann. Erstes Heft. Carlsruhe, 1845.

from a different point of view, and with different materials. It was well that this was so, for the conclusions thus far reached would probably have failed of general acceptance but for the support obtained by the publication of similar results achieved by a man of different nationality and diverse training. The history of all forms of decipherment of unknown languages shows that skepticism concerning them is far more prevalent than either its opposite, credulousness, or the happy mean of a not too ready faith.

The man who was thus to rebuke the gainsayer and put the capstone upon the work of the decipherment of the Persian inscriptions was Major (afterward Sir) Henry Rawlinson, who was born at Chadlington Park, Oxfordshire, England, on April 11, 1810. While still a boy Rawlinson went out to India in the service of the East India Company. There he learned Persian and several of the Indian vernaculars. This training hardly seemed likely to produce a man for the work of deciphering an unknown language. It was just such training as had produced men like the earlier travelers who had made the first copies of the inscriptions at Persepolis. It was, however, not the kind of education which Grotefend, Burnouf, and Lassen had received. In 1833 the young Rawlinson went to Persia, there to work with other British officers in the reorganization of the Persian army. To Persia

Sir Henry C. Rawlinson

Born at Chadlington, Oxon, April 11, 1810, in 1827 went out to India; political agent at Kandahar, 1840; long resident in Baghdad; envoy and minister plenipotentiary in Persia, 1859; member of Parliament, 1865-1868; trustee of the British Museum, 1876; G.C.B., 1889; Baronet, 1891; died in London March 5, 1895, after a marvelously full life.



his services were of extraordinary value, and met with hearty recognition. It was in Persia, while engaged in the laborious task of whipping semi-barbarous masses of men into the severe discipline of the soldier's life, that the attention of Rawlinson was attracted by some inscriptions. The first that roused an interest in him were those at Hamadan, which he copied with great care. This was in the year 1835, at a time when a number of European scholars were earnestly trying to decipher the inscriptions from Persepolis. Of all this eager work Rawlinson knew comparatively little. It is impossible now to determine exactly when he first secured knowledge of Grotefend's work, for Norris, the secretary of the Royal Asiatic Society, has left us no record of when he first sent copies of Grotefend's esayss to the far-distant decipherer. Whatever was sent in the beginning, it is quite clear that Rawlinson worked largely independently for a considerable time. He had certainly begun his work and adopted his method before he learned of what was going on in Europe.[1]

Rawlinson's method was strikingly like that adopted in the first instance by Grotefend. He had copied two trilingual inscriptions. That he had before him three languages, and not merely three styles of writing, he appears to have under-

[1] On Rawlinson's life, and also on his work as a decipherer, see now *A Memoir of Major-General Sir Henry Creswicke Rawlinson*, by George Rawlinson. London, 1898. The notice of Rawlinson's work here given was written before the appearance of this memoir.

stood at once. To this ready appreciation of the presence of three languages Rawlinson's experience of the polyglot character of the East had probably contributed. In 1839 he thus wrote concerning his method of decipherment:

"When I proceeded . . . to compare and interline the two inscriptions (or, rather, the Persian columns of the two inscriptions, for as the compartments exhibiting the inscription in the Persian language occupied the principal place in the tablet, and were engraved in the least complicated of the three classes of cuneiform writing, they were naturally first submitted to examination) I found that the characters coincided throughout, except in certain particular groups, and it was only reasonable to suppose that the groups which were thus brought out and individualized must represent proper names. I further remarked that there were but three of these distinct groups in the two inscriptions; for the group which occupied the second place in one inscription, and which, from its position, suggested the idea of its representing the name of the father of the king who was there commemorated, corresponded with the group which occupied the first place in the other inscription, and thus not only served determinately to connect the two inscriptions together, but, assuming the groups to represent proper names, appeared also to indicate a genealogical succession. The natural inference was that in these three groups

of characters I had obtained the proper names belonging to three consecutive generations of the Persian monarchy; and it so happened that the first three names of Hystaspes, Darius, and Xerxes, which I applied at hazard to the three groups, according to the succession, proved to answer in all respects satisfactorily and were, in fact, the true identifications."[1]

In the autumn of 1836, while at Teheran, Rawlinson first secured an acquaintance with the works of Saint Martin and Klaproth, but found in them nothing beyond what he had already attained by his own unaided efforts, and in certain points he felt that he had gone further than they, and with greater probability.

The great work of Rawlinson's life is associated with the sculptures and inscriptions near the villiage of Bisutun, or Bisitun, called by Rawlinson Behistun.[2] This insignificant village lies on the main caravan road between Hamadan and Kermanshah, about twenty miles from the latter. The Rock of Bisutun is the last peak of "a long, narrow range which skirts the plain of Kermanshah on the east." This peak rises to a height of thirty-eight hundred feet and its precipitous sides offered tempting surfaces for the cutting of

[1] *Journal of the Royal Asiatic Society*, x, pp. 5, 6.

[2] Rawlinson's form of the name is derived from the Arabic geographer Yakut, but the modern inhabitants call it now Bisitun, or Bisutun (see King, *The Sculptures and Inscription of Darius the Great on the rock of Behistun in Persia;* London, 1907, p. xi). The ancient name is τὸ Βαγίστανον ὄρος, according to Diodorus Siculus, and this is doubtless the original of the modern name.

inscriptions. At their foot bubbling springs of water halted caravans for refreshment, and just above the springs, at an altitude of five hundred feet above the caravan road, there stretches upon the smoothed surface of the mountain a series of sculptures and inscriptions for a space of "rather more than fifty-eight feet and six inches."[1]

The first notice of these inscriptions comes from the first century of the Christian era, when Diodorus Siculus recorded that they were the work of Semiramis, who caused them to be made on her way from Babylon to Ecbatana.[2] Much more important, as also more truthful, is his statement that Alexander the Great visited the Rock on his march from Susa to Ecbatana.[3] Soon afterward the Rock and its silent messages passed from the minds of the learned, and are no more mentioned until the seventeenth century brought the beginnings of the great flood of modern travelers. None of these knew what the inscriptions might mean, and even so late as 1822 Sir Robert Ker Porter thought that the bas-relief commemorated the "total conquest over Israel by Shalmaneser, king of Assyria and the Medes."[4]

[1] Booth (*The Discovery and Decipherment of the Trilingual Cuneiform Inscriptions*, p. 103) gives the size as one hundred and fifty feet in length by one hundred feet in height. The figures here given are those of King and are the results of actual measurement.

[2] Diodorus, ii, 13 (ed. Vogel, i, p. 190. Teubner. Leipzig, 1888).

[3] Diodorus, xvii, 110 (ed. Fischer, iv, p. 303. Teubner. Leipzig, 1905).

[4] Sir Robert Ker Porter, *Personal Narrative of a Journey from India to England*. Second edition, vol. ii, p. 80, f. London, 1827. Cited by King, *op. cit.*, p. xv.

It was reserved for Rawlinson to prove that the royal figure was not Semiramis, nor yet Shalmaneser, but Darius I, and as early as 1835 he began to try to copy by means of a field glass the Persian text. At this time he could not copy the whole text, but gained more of it in 1837, when he had become more skilled in the strange character. In that year he forwarded to the Royal Asiatic Society of London his translation of the first two paragraphs of this Persian inscription, containing the name, titles, and genealogy of Darius. It must be remembered that Rawlinson had accomplished this without a knowledge of the related languages, except for what he could extract from the researches of Anquetil-Duperron. In the autumn of 1838, however, he came into possession of the works of Burnouf on the Avestan language, which proved of immense value in his work. He also secured at the same time the copies of the Persepolis inscriptions made by Niebuhr, Le Brun, and Porter, and the names of countries in them were of great assistance to him, as they already had been to Burnouf and Lassen. With the advantage of almost all that European scholars had done, Rawlinson was now able to make rapid progress, and in the winter of 1838–1839 his list of ancient Persian signs was almost complete. He was, however, unwilling to publish his results until he had ransacked every possible source of information which might have

any bearing on the matter. In 1839 he was settled in Baghdad, his work in reality finished and written out for publication, but still hesitating and waiting for more light. Here he obtained books from England for the study of Sanskrit, and a letter from Professor Lassen, which greatly pleased him, though from it he was able to obtain only one character which he had not previously known. Here also he received the copies which Mr. Rich had made at Persepolis, and a transcript of an inscription of Xerxes at Van which had been made by M. Eugène Boré.[1] In this year (1839) he wrote his preliminary memoir, and expected to publish it in the spring of 1840.

Just at this juncture he was suddenly removed from Baghdad and sent to Afghanistan as political agent at Kandahar. In this land, then in a state of war, he spent troublous years until 1843. He was so absorbed in war, in which he won distinction, and in administration as well, that his Oriental studies had to be given up entirely.

In December, 1843, he was returned to Baghdad, the troubles in Afghanistan being ended for the time, and at once resumed his investigations. He was now aided by the fresh copies and corrections of the Persepolis inscriptions which Westergaard had made, and was shortly impelled to

[1] This was afterward published. Lettre sur quelques antiquités de la Perse, *Journal Asiatique*, Avril, 1842, pp. 327–336.

make a fresh assault upon the great inscription of Darius.

In the summer of 1844 he returned to Bisutun, accompanied by Mr. Hester and Captain Jones, R. N., and began the dangerous task of making a copy of the second or Susian Version, which he then called the Scythic. He has told his story in these vivid sentences:

"On reaching the recess which contains the Persian text of the record, ladders are indispensable in order to examine the upper portion of the tablet; and even with ladders there is considerable risk, for the foot ledge is so narrow—about eighteen inches, or, at most, two feet, in breadth, that with a ladder long enough to reach the sculptures sufficient slope cannot be given to enable a person to ascend, and, if the ladder be shortened in order to increase the slope, the upper inscriptions can only be copied by standing on the topmost step of the ladder, with no other support than steadying the body against the rock with the left arm, while the left hand holds the note book, and the right hand is employed with the pencil. In this position I copied all the upper inscriptions [these are Persian] and the interest of the occupation entirely did away with any sense of danger.

"To reach the recess which contains the Scythic [i. e., Susian] translation of the record of Darius is a matter of far greater difficulty. In the left-hand side of the recess alone is there

any foot ledge whatever; on the right hand, where the recess, which is thrown a few feet further back, joins the Persian tablet, the face of the rock presents a sheer precipice, and it is necessary therefore to bridge this intervening space between the left-hand of the Persian tablet and the foot ledge on the left hand of the recess. With ladders of sufficient length, a bridge of this sort can be constructed without difficulty; but my first attempt to cross the chasm was unfortunate, and might have been fatal, for, having previously shortened my only ladder in order to obtain a slope for copying the Persian upper legends, I found, when I came to lay it across to the recess in order to get at the Scythic translation, that it was not sufficiently long to lie flat on the foot ledge beyond. One side of the ladder would alone reach the nearest point of the ledge, and, as it would of course have tilted over if a person had attempted to cross in that position, I changed it from a horizontal to a vertical direction, the upper side resting firmly on the rock at its two ends, and the lower hanging over the precipice, and I prepared to cross, walking on the lower side and holding to the upper side with my hands. If the ladder had been a compact article, this mode of crossing, although far from comfortable, would have been at any rate practicable; but the Persians merely fit in the bars of their ladders without pretending to clench them outside, and I had hardly accord-

ingly begun to cross over when the vertical pressure forced the bars out of their sockets, and the lower and unsupported side of the ladder thus parted company from the upper, and went crashing down over the precipice. Hanging on to the upper side, which still remained firm in its place, and assisted by my friends, who were anxiously watching the trial, I regained the Persian recess, and did not again attempt to cross until I had made a bridge of comparative stability."[1]

Under such difficult and perilous conditions he made complete copies of the Persian and also of the Susian texts, and made them with such amazing accuracy that very few corrections, all things considered, have had to be made.

At last, after many delays and discouragements, he published, in 1846, in the *Journal of the Royal Asiatic Society*, his memoir, or series of memoirs, on the ancient Persian inscriptions, in which for the first time he gave a nearly complete translation of the whole Persian text of Behistun. In this Rawlinson attained an imperishable fame in Oriental research. His work had been carried on under difficulties, of which the European scholars had never even dreamed,

[1] *Archæologia*, xxxiv, 1852, p. 74, f. This was given in a paper by Rawlinson read before the Society of Antiquaries, London, March 7, 1850, and with it was given a double plate copy of some of the Susian characters in full size (Plate ix) and an excellent engraved picture of the whole of the sculptures and inscriptions. The passage is quoted also by King, *The Sculptures and Inscription of Darius the Great, on the Rock of Behistun in Persia*, p. xvii, f. London, 1907.

but he had surpassed them all in the making of an intelligible and connected translation of a long inscription. Remarkable as this was, perhaps the most noteworthy matter in connection with his work was this, that much of it had been done with small assistance from Europe.[1] He had, indeed, received from Norris, Grotefend's results, though not at the very beginning, and he was later supplied with all that other scholars had been able to accomplish. Furthermore, as early as 1837, he was in correspondence with Burnouf and Lassen, from both of whom he gained assistance. When all allowance is made for these influences, his fame is not

[1] George Rawlinson has attached himself to the view that Sir Henry Rawlinson had almost completed the work of decipherment of the Old Persian alphabet before he learned anything of the work of Grotefend. He says: "Up to this time [end of 1836] he had no knowledge at all of the antecedent or contemporary labors of continental scholars, but had worked out his conclusions entirely from his own observation and reasoning" (*Memoir*, p. 309). This view rests upon the decipherer's own recollections of his work. It is, however, almost certain that Sir Henry Rawlinson forgot just when he first learned of Grotefend's work, and thought he was independent, when in reality he was assisted by Grotefend, Burnouf, and Lassen. In 1884 he carried on a spirited controversy with Professor F. Max Müller concerning the right of priority of discovery. In one of his letters he speaks thus of the matter: "Now, for my own part, I take leave to say that, though I worked independently, and with some success, in my early attempts to decipher the Persian cuneiform inscriptions (from 1835 to 1839), still I never pretended to claim priority of discovery over Grotefend, Burnouf, and Lassen. . . . As I was in pretty active correspondence with Bournouf and Lassen from 1837 to 1839 on the values of the cuneiform characters, it is impossible to say by whom each individual letter became identified" (*Athenæum*, November 8, 1884, p. 593). This letter makes it sufficiently plain that Rawlinson himself when he carefully considered the matter did not make so great a claim for himself as does his brother in the admirable memoir. His fame is secure, and needs not to be established by any attempt to prove that he was wholly independent of European scholars in all his earlier work.

diminished nor the extent of his services in the decipherment curtailed. His method was settled early and before he knew of Lassen's work. That two men of such different training and of such opposing types of mind should have lighted upon the same method, and by it have attained the same results, confirmed, in the eyes of many, the decipherment.

The whole history of the decipherment of these ancient Persian inscriptions is full of surprises, and another now followed immediately. In January, 1847, the *Dublin University Magazine* contained an unsigned article with the attractive title, "Some Passages of the Life of King Darius," the opening sentences of which were as follows:

"In adding this new name to the catalogue of royal authors, we assure our readers that we are perfectly serious. The volume which contains this monarch's own account of his accession, and of the various rebellions that followed it, is now before us; and unpretending as it is in its appearance, we do not hesitate to say that a more interesting—and on many accounts a more important—addition to our library of ancient history has never been made."[1]

After this introduction the writer proceeds to narrate how Major Rawlinson had copied at Behistun the inscription of Darius and how he had successfully deciphered it. As the paper pro-

[1] *Dublin University Magazine*, Dublin, 1847, p. 14.

ceeds, the anonymous writer goes beyond the work of Rawlinson to tell of what had been done in Europe by Grotefend and others, displaying in every sentence the most exhaustive acquaintance with the whole history of the various attempts at decipherment. Then he falls into courteous and gentle but incisive criticism of some of Major Rawlinson's readings or translations, and herein displays a mastery of the whole subject which could only be the result of years of study. There was but one man in Ireland who could have written such a paper as that, and he was a quiet country rector at Killyleagh, County Down, the Rev. Edward Hincks.[1] He was born at Cork, in 1792, and was therefore the senior of Rawlinson by about eighteen years. After an education at Trinity College, Dublin, that wonderful nursery of distinguished Irishmen, where he took a gold medal in 1811, he was settled in 1825 at Killyleagh, to spend the remainder of his life. His first contributions to human learning appear to have been in mathematics, but he early began to devote himself to Oriental languages, publishing in 1832 a Hebrew grammar. He was one of the pioneers of Egyptian decipherment, and his contributions to that great work are acknowledged now to be of the highest rank.

[1] Apart from the internal evidence there is now no doubt that this paper was written by Hincks, though published anonymously. See Adler, *Proceedings of the American Oriental Society*, October, 1888, p. civ; and compare Stanley Lane Poole, *Dictionary of National Biography*, xxvi, p. 439.

Unhappily his life has never been worthily written, and it is impossible to determine just when he first began to study the inscriptions of Persepolis. It is, however, clear that, independently of Rawlinson, he arrived at the meaning of a large number of signs, and had among his papers, before Rawlinson's work appeared, translations of some of the Persepolitan texts. His first published memoir was read before the Royal Irish Academy on June 6, 1846, having been written in the month of May in that year. In this paper Hincks shows an acquaintance with the efforts at decipherment which had been made by Westergaard and Lassen, but he seems not to have seen the works of the other Continental decipherers. He had much surpassed these two without the advantage which they enjoyed of more complete literature.

In the work of Hincks the Persepolitan inscriptions had been now for the third time independently deciphered and in part translated. With this Dr. Hincks did not cease his work, but went on to larger conquests, of which we shall hear later in this story.

The work of decipherment was now over as far as the ancient Persian inscriptions were concerned. There was, of course, much more to be learned concerning the language and the historical material which the inscriptions had provided. On these and other points investigation would go on even to this hour. But the

pure work of the decipherer was ended, the texts were read. A language long dead lived again. Men long silent had spoken again. It seemed a dream; it was a genuine reality, the result of long and painful study through a series of years by scores of men, each contributing his share.

Though the work upon Persian was in this advanced stage, very little had yet been done with the other two languages upon these same inscriptions. What might be the result of a similar study of them nobody now knew. It was believed that the columns written in two other languages contained the same facts as those which had been so laboriously extracted from old Persian, and there was, therefore, little incitement to their study. Before the end of this period, however, there were beginning to be hints that these other two languages were important, and that one of them was the representative of a great people who possessed an extensive literature. The proofs that this was indeed true were now slowly beginning to accumulate, and, when enough of them were gathered to make an impression, the men who were gifted with the decipherer's skill would turn from the Persian to unravel the secrets of the unknown and unnamed languages which the kings of Persia had commanded to be set up by the side of their own Persian words. Great results had already flowed from the Persian studies. New light had been cast upon many an enigmatical passage in Hero-

dotus; a whole kingdom had been permitted to speak, not through its enemies, as before, but for itself. But all this was as nothing compared with the untold, unimagined results which were soon to follow from a study of the third language which existed in all the groups at Persepolis. To this study men were now to be wrought up by the brilliant work of explorers.

We have traced one story—the story of decipherment. We turn now to a second story, the story of exploration.

EXCURSUS

THE ROMANTIC HISTORY OF FLOWER'S COPIES OF INSCRIPTIONS

The first characters from Persepolis which were published in England appeared in the *Philosophical Transactions* for June, 1693, and their history was so peculiar and of such considerable importance that they are here reproduced and the story of their misuse in various forms is set forth.

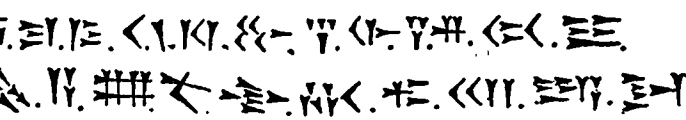
The beginning of the story is found in a letter sent by Francis Aston to the publisher, which, with all its solecisms, runs thus:

"Sir, I here send you some Fragments of Papers put into my hands by a very good Friend, relating to antique and obscure Inscriptions, w^{h} were retrieved after the Death of Mr. *Flower*, Agent in *Persia* for our East India Company; who while he was a Merchant at *Aleppo* had taken up a resolution to procure some Draught

or Representation of the admired Ruines at *Chilmenar*, pursuant to the third Enquiry for *Persia*, mentioned in the Philosophical Tranactions, pag. 420, viz., whether there being already good Descriptions in words of the Excellent Pictures and Basse Relieves that are about Persepolis at Chilmenar yet none very particular, some may not be found sufficiently skilled in those parts, that might be engaged to make a Draught of the Place, & the Stories their [*sic*] pictured & carved. This Desire of the Royal Society, as I believe, it hinted at a Summary Delineation, w^{h} might be perform'd by a Man qualify'd in a few days, taking his own opportunity for the avoiding much Expence, (w^{h} you know they are never able to bear:) So I cannot but think Mr. *Flower* conceived it to be a business much easier to perform then [*sic*] he found it upon the place, where he spent a good deal of Time and Money, & dying suddainly after, left his Draughts & Papers dispersed in several hands, one part whereof you have here, the rest its hoped may in some wise be recovered, if Sir John Chardin's exact & accurate Publication of the entire Word do not put a period to all further Curiosity, w^{h} I heartily wish."

Accompanying this letter was a lithographed plate of inscriptions from Nocturestand, that is Naksh-i Rustam, and from Chahelminar, that is, Persepolis. They had been copied by Flower in

November, 1667. The first, second, and fourth of these inscriptions are Sassanian and Greek, while the third and sixth are Arabic. The fifth consists of two lines of cuneiform characters as follows:



To these cuneiform characters Mr. Flower had added this explanatory note:

"This character, whether it be the ancient writing of the *Gawres* and *Gabres*, or a kind of *Telesmes* is found only at *Persepolis*, being a part of what is there engraven in white Marble, & is by no man in Persia legible or understood at this Day. A Learned Jesuit Father, who deceased three years since, affirmed this character to be known & used in *Egypt*."

The editor appended to this a note which showed that he was a man of some penetration: "it seems written from the Left Hand to the Right, and to consist of Pyramids, diversely posited, but not joined together. As to the Quantity of the Inscriptions, *Herbert* reckon'd in one large Table Twenty Lines of a prodigious Breadth. Of this sort here are distinct Papers, each of several Lines."

Aston appears to have been much interested in these papers of his deceased friend, for he recurs to the matter again to say that in February,

1672, Flower had compared these cuneiform signs with twenty-two characters, "Collected out of the Ancient Sculptures, to be found this day extant in the admired Hills of Canary."

It is unfortunate that Flower died without publishing his own copies of inscriptions. If he had lived to give them forth, a curious catalogue of mistakes might have been avoided.

Mr. Aston doubtless supposed that the characters formed an inscription either complete or at least connected. These characters, as a matter of fact, were selected by Flower from the three languages at Persepolis, and do not form an inscription at all. As published by Aston they are taken at random from Persian, Susian, and Assyrian, as the following list will show. The first line begins with three Persian characters (a, ra, sa), the next is Assyrian (u), and after it the Persian word-divider. After these come one Persian (ta) and three Assyrian (bu, ša, si) syllabic signs; then one Susian (ša), one Assyrian (rad), one Persian (ha), and finally one Assyrian (i) character. The second line is equally mixed. It begins with a Persian sign (probably *bumi*, i. e., "earth") followed by three Assyrian (a, ú, nu), one Susian (ak) and then another Assyrian (kha) sign. These are followed by one Susian (ti), one Persian (*dahiu* = land), one Assyrian (ya), and finally one Susian (ta). The signs were exceedingly well copied, and it is a pity that a man who could copy so well had

not been able to issue all his work. It might have hastened the day of the final decipherment.

Instead of really contributing to a forward movement in the study of the Persepolis inscriptions, Flower's copies resulted in actual hindrance to the new study.

The history of this retrograde movement is a curious chapter in the history of the science of language. It deserves to be followed step by step if for naught else than for its lessons in the weaknesses of human nature.

The cuneiform characters of Flower now began an extraordinary and unexpected career. The first man who appears to have noticed them was Thomas Hyde, who was Professor of Hebrew in the University of Oxford, but, like certain Hebrew professors in later days, devoted much energy to other Oriental study. His great book was on the religion of the Persians,[1] in which he discussed many things, without always displaying much willing receptiveness for those that were new. He reproduced in a plate the cuneiform characters of Flower, together with some Sassanian and Palmyrene inscriptions. Over the Sassanian and Palmyrene texts Hyde waxes eloquent of denunciation. He bewails the sad fact that these "wretched scribblings, made perhaps

[1] Thomas Hyde, *Historia Religionis veterum Persarum, eorumque Magorum.* Oxonii, 1700. The second edition appeared at Oxford, in 1760, under the title *Veterum Persarum et Parthorum et Mediorum Religionis Historia.*

by ignorant soldiers," had been left to vex a later day. Then he comes to a discussion of the cuneiform characters, and gives them that very name (*dactuli pyramidales seu cuneiformes*).[1] Next he quotes Aston's statement that Herbert had mentioned twenty lines of similar writing at Persepolis. Hyde waves this statement majestically aside, and gives a long argument to show that these signs were not letters, nor intended for letters, but are purely ornamental.[2] He attached great importance to the interpunction in Flower's copy, and adds that Herbert and Thevenot had given three lines of the same kind of ornamentation, but as they did not give any interpunction, he pronounces their copies worthless. Just here he made a series of mistakes. In the first place, of course, the interpunction was the invention of Flower, and was, as we now see, merely his way of indicating that he had copied only separate and selected signs. In the next place, Thevenot gives no copies of inscriptions at all. Hyde had evidently seen some copies in some place and was quoting from memory. One wonders whether he had not seen the copies of Mandeslo, and had in memory confused him with Thevenot.

The next man who was moved to make use of the characters of Flower was a Dutchman, Wit-

[1] *Ibid.*, first edition, p. 526; second edition, p. 556.

[2] "Me autem judice non sunt Literae, nec pro Literis intendebantur; sed fuerunt solius Ornatûs causa . . ."—*Ibid.*, first edition, p. 527; second edition, p. 557.

sen, who was gifted with a keen eagerness for the marvelous. He calmly reproduces Flower's characters, which he had most probably copied from Hyde, and introduces them to his readers in a remarkable narrative. "In the lands beyond Tarku, Boeriah, and Osmin," he says, "is a country where a German medical man, who had traversed it when flying from the anger of Stenko Rasin, has told me he had seen on arches, walls, and mountains sculptured letters of the same form as those found on the ruins of Persepolis, which he had also seen. This writing belonged, it is said, to the language of the ancient Persians, Gaures, Gabres, or worshipers of fire. Two specimens of them are given here, though these characters are now unintelligible. Throughout the whole country, said this medical man, above all at a little distance from Derbent, in the mountains beside which the road passes, one sees sculptured on the rock figures of men dressed in strange fashion like that of the ancient Greeks, or perhaps Romans, and not only solitary figures, but entire scenes and representations of men engaged in the same business, besides broken columns, aqueducts, and arcades for walking over pits and valleys. Among other monuments there is there a chapel built of stone, and reverenced by some Armenian Christians who live in its neighborhood, and on the walls of which were engraved many of the characters of which I have spoken. This chapel had for-

merly belonged to the pagan Persians who adored a divinity in fire."[1]

This whole account bears every mark of having been manufactured to fit the inscriptions. No such ruins have been seen by any person in the country described, and no inscriptions have been found there. The cuneiform characters had to be accounted for in some way, and this was Witsen's method.

But more and worse things were still to be invented to account for these same little characters of Flower.

In 1723 Derbent and Tarku were visited by Dimitri Cantémir, Prince of Moldavia, who had the patronage of the czar, Peter the Great, in his search for antiquities and inscriptions. He died at Derbent, and the inscriptions he saw are all catalogued by Frähm, and there is no cuneiform inscription among them. The prince's papers passed into the hands of Th. S. Bayer, who utilized them in a book, *De Muro Caucaseo*, in which he tried to prove that this wall was built in the time of the Medo-Persian empire. Now, Bayer was acquainted with Witsen's book, and made references to it, but he evidently did not believe in the marvelous story which Witsen told concerning the cuneiform inscriptions, for he makes no reference to it at all, whereas that

[1] Nicolaus Witsen, *Noord en Oost Tartarye*, II Part, p. 563. Amsterdam, 1705. Quoted by Burnouf, *Mémoire sur deux inscriptions*. Paris, 1836, pp. 177, 178.

would have given the most conclusive proof of the main thesis of his book which could possibly be suggested. Here were inscriptions of the Medo-Persian people, found at the very wall which he desired to prove was Medo-Persian in origin. But the end was not yet concerning the papers of the unfortunate Prince of Moldavia. Professor Guldenstädt planned a trip through the Caucasus in 1766–69, and friends put in his hands certain papers to be used on the journey. Among them was a copy of Flower's cuneiform characters. It seems probable that he was informed that this copy belonged to Cantémir's papers, for when Guldenstädt's papers came into the hands of Klaproth he attached to the Flower characters this note: "Inscriptions de Tarkou, d'après un Dessin du prince Dimitri Cantémir, qui se trouvait avec les Instructions de Guldenstädt. St.P.4 Aug., 1807."[1] Now here, by a chapter of accidents, mistakes, and deceits, were Flower's signs localized at Tarku, and of course considered a veritable inscription.

In 1826 F. E. Schulz was sent by the French government to the East to search for inscriptions, and he took with him the Flower signs, with Klaproth's note attached. It was probably his intention to go to Tarku and collate the copy with the original inscription, for, of course, he had no doubt that it really existed. Schulz, however, was murdered at Julameih in 1829, and

[1] Burnouf, *ibid.*, p. 178.

when many of his papers were recovered, there was found among them the same old copy of Flower. Schulz's copies were published, and the "inscription of Tarku" appears with the rest.

The next man to allude to it was Saint Martin, who gravely informs his readers that this inscription was carved above the gate of Tarku,[1] thus adding a little definiteness to the tradition.

Naturally enough the Flower copy made its way to Grotefend, who was, however, not deceived by it.[2] He recognized at once that it really consisted of a number of characters selected from all three languages which were found at Persepolis, though he did not know that Flower was the copyist. This was in 1820, and one might have expected that this would end the wanderings and the fictitious history of Flower's copies. But not just yet; there was still vigor in the story and the race was not yet over.

In 1836 Burnouf got a copy of the same lines and set to work earnestly to decipher them. He found that they contained the name of Arsakes, repeated three times.[3]

In 1838 Beer discussed the lines, and attached himself to Grotefend's view, recognizing the fact that they did not form an inscription at all.

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[1] *Nouvelles Observations sur les inscriptions de Persepolis*, par M. Saint Martin, Mem. de l'Acad. des Inscriptions et Belles-Lettres, IIe Série, tom. xii, p. 114.

[2] *Hall. allgem. Lit.-Zeitung*, April, 1820, p. 845.

[3] Burnouf, *Mémoire sur deux inscriptions*. Paris, 1836, pp. 176, ff.

Burnouf's translation did not suit the next investigator very well, and he began afresh to decipher and translate. This was A. Holtzmann, who argued learnedly that the lines formed a genuine Persepolitan text of great interest. The inscription was indeed a memorial of Arses, who was murdered in B. C. 336 by Bagoas. Holtzmann thus translated the text:

"Arses (son) of Artaxerxes, King of Provinces, the Achamenian, made (this)."

Here was indeed a fitting conclusion of the whole matter. Flower had copied a few signs out of three different languages, and out of them had been woven this elaborate history. It is a melancholy story from one point of view. But it is instructive also as showing that progress in knowledge is not uniform, but has its undertow as well as its advancing wave. Happily there is a dash of humor in it as well.

CHAPTER III

EARLY EXPLORERS IN BABYLONIA

WHEN the city of Nineveh fell, and when Babylon was finally given over to the destroyer, a deep darkness of ignorance settled over their ruins. The very site of Nineveh was forgotten, and, though a tradition lived on which located the spot where Babylon had stood, there was almost as little known of that great capital as of its northern neighbor. In the Middle Age the world forgot many things, and then with wonderful vigor began to learn them all over again. In the general spell of forgetfulness it cast away all remembrance of these two great cities. Even the monk in his cell, to whose industry as a copyist the world owes a debt that can never be paid, recked little of barbarous cities, whose sins had destroyed them. He knew of Jerusalem and of Bethlehem, for these had imperishable fragrance in his nostrils. They were sacred cities in a sacred land, and he sighed as he thought that they were now in the hands of infidels. But Nineveh and Babylon, they were mentioned, it is true, in the prophets; but then Nahum had cursed the one and Isaiah predicted the destruction of the other, and they had received their

deserts. Where they might be he knew not, nor cared. But after a time came the period when Europe began to relearn, and that with wonderful avidity. The Crusades roused all Europe to a passionate interest in the Orient. Palestine, Syria, and Egypt were traversed by one after another of travelers who visited sacred scenes and came home to tell wonderful stories in Europe. Of these almost all were Christians, who knew in greater or less degree the New Testament, but were for the more part hopelessly ignorant of the Old Testament. They would fain see the land of the Lord, but cared little for associations with Old Testament prophets, heroes, or kings.

But at last there appeared a man who had wider interests than even those that concerned the land of Palestine. He was a Jewish rabbi of Tudela, in the kingdom of Navarre. The Rabbi Benjamin, son of Jonah, set out from home about 1160 A. D., and journeyed overland across Spain and France, and thence into Italy. As he went he made the most careful notes of all that he saw, and gave much attention to the learned and pious men of his own faith whom he met. From Italy he passed over to Greece, and then on to Constantinople, with which he was profoundly impressed. After he had visited the sacred spots in Palestine he went over the desert by way of Tadmor, and crossed the Euphrates, and then journeyed on eastward to the Tigris, where he

visited the Jews of Mosul. Of Mosul and its surroundings he had this to relate:

"This city, situated on the confines of Persia, is of great extent and very ancient; it stands on the banks of the Tigris, and is joined by a bridge to Nineveh. Although the latter lies in ruins, there are numerous inhabited villages and small towns on its site. Nineveh is on the Tigris distant one parasang from the town of Arbil."[1]

From Nineveh Benjamin of Tudela passed on down the river and visited Baghdad, then a great center of culture both Mohammedan and Jewish, and this was more to him than even its wealth, and it is as to a climax that his last sentence concerning this city comes:

"The city of Baghdad is three miles in circumference, the country in which it is situated is rich in palm trees, gardens, and orchards, so that nothing equals it in Mesopotamia. Merchants of all countries resort thither for purposes of trade, and it contains many wise philosophers, well skilled in sciences, and magicians proficient in all sorts of enchantment."[2]

From Baghdad Benjamin went on to Gihiagin, or Ras-al-Ain, which he mistakenly identified with Resen (Gen. 10. 12), and then continues his narrative thus:

"From hence it is one day to Babylon. This is

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[1] *Itinerarium Beniamin Tudelensis. Ex Hebraico Latinum factum Bened. Aria Montano interprete.* Antverpiæ, M.D.LXXV, p. 58.

[2] *Ibid.*, pp. 69, 70.

the ancient Babel, and now lies in ruins; but the streets still extend thirty miles. The ruins of the palace of Nebuchadnezzar are still to be seen, but people are afraid to venture among them on account of the serpents and scorpions with which they are infested. Twenty thousand Jews live about twenty miles from this place, and perform their worship in the synagogue of Daniel, who rests in peace. This synagogue is of remote antiquity, having been built by Daniel himself; it is constructed of solid stones and bricks. Here the traveler may also behold the palace of Nebuchadnezzar, with the burning fiery furnace into which were thrown Hananiah, Mishael, and Azariah; it is a valley well known to everyone. Hillah, which is at a distance of five miles, contains about ten thousand Jews and four synagogues. . . . Four miles from hence is the tower built by the dispersed Generation. It is constructed of bricks called al-ajurr; the base measures two miles, the breadth two hundred and forty yards, and the height about one hundred canna.[1] A spiral passage, built into the tower (in stages of ten yards each), leads up to the summit, from which we have a prospect of twenty miles, the country being one wide plain and quite level. The heavenly fire, which struck the tower, split it to its very foundation."[2]

[1] The canna as a measure is of variable length. At Malta it was 82.2 inches. Elsewhere it varied from 44 to 118 inches.

[2] *Ibid.*, pp. 70, 71. Compare also Martinet, *Reisetagbuch des Rabbi Binjamin von Tudela.* Bamberg, 1858, pp. 16, 18. For English trans-

That Benjamin of Tudela actually did visit Mosul, and that he there saw across the river the great mounds which marked the ruins of Nineveh there is no reason to doubt, but it is not so clear that he also saw the ruins of Babylon. He did make the visit to Baghdad, for that city is described in the terms of an eyewitness. It is, however, not certain that he had really seen the ruins of Babylon, for his description lacks the little touches which accompanied the former narrative. He is here probably reproducing simply what he had heard from others concerning these ruins.

Benjamin of Tudela wrote his narrative in Hebrew. It was known to the learned during the thirteenth, fourteenth, and fifteenth centuries, but was not printed until 1543, when it appeared at Constantinople in the rabbinic character. In 1633 it appeared, with a Latin translation, at Leyden. It later appeared in English and French, and thus became known over a large part of Europe. Though thus well known, the book of Benjamin appears to have attracted no attention to the buried cities of Nineveh and Babylon.

Like the first scant notices of Persepolis given by the earlier travelers, these notes of Benjamin

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lations see Thomas Wright, *Early Travels in Palestine*, London (Bohn), 1848, pp. 94, 100, and especially A. Asher, *The Itinerary of Rabbi Benjamin of Tudela*. London and Berlin, 1840, i, pp. 91, 92, 105–107. See further, *The Itinerary of Benjamin of Tudela*, by Marcus N. Adler, *Jewish Quarterly Review*, xvi, pp. 453, ff.

Street Scene in Mosul.

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of Tudela would bear fruit in a later day, for they would incite other travelers to visit the same mysterious ruins.

The next word of information concerning the ancient sites was brought to Europe by another Jew, the Rabbi Pethahiah of Ratisbon (Regensburg), whose recollections were set down by one of his disciples,[1] after the scanty notes which he had made by the way.

The time was now hastening on toward the period when men of Europe began to travel extensively in the Orient, and of these many visited both Mosul and Baghdad. Most of them, however, did not pay any attention to the ruins which lay near these cities. Many, like Sir John Mandeville (1322–56), made no journey to these sites, but were contented to report what they had heard concerning them. Marco Polo appears to have cared nothing for the ruins, and, though he visited both Mosul and Baghdad, never refers to them. Others confounded Baghdad with Babylon, and really believed that the Mohammedan capital was the same city as that which Nebuchadrezzar had made powerful.

On the evening of October 24, 1574, the learned botanist and physician, Dr. Leonhart

[1] This was Judah ben Samuel he-Hasid, who published them first under the abbreviated title "Sibbub" at Prague in 1595. This edition I have not seen. A convenient edition in Hebrew and English is A. Benish, *The Travels of Rabbi Petahyah*, London, 1856. Rabbi Pethahiah is supposed to have died about 1190.

Rauwolff, of Augsburg, in Bavaria, came to the village of Feluja, which he calls Elugo. He had come from Aleppo, intending, as he says, "to go thence to Babylon, which is now called Felugo," or, as he writes in other places, Elugo. Having described the bridge over the Euphrates, which he supposed was erected by the ancients, he proceeds thus: "Something further, just before the village Elugo is the Hill whereon the Castle did stand in the Plain, whereon you may still see some Ruines of the Fortification, which is quite demolished and uninhabited: behind it pretty near to it, did stand the Tower of Babylon, which the children of Noah (who first inhabited these Countries after the Deluge) began to build up unto Heaven; this we see still, and it is half a league in Diameter, but it is so mightily ruined, and low and so full of Vermin that have bored holes through it, that one may not come near it within half a Mile, but only in two Months in the Winter, when they come not out of their holes. Among these Insects, there are chiefly some in the Persian language called Eglo by the Inhabitants that are very poisonous; they are (as others told me) bigger than our Lizards and have three Heads, and on their Back several Spots of several Colours."[1]

[1] *A Collection of Curious Travels and Voyages.* In Two Tomes. The First containing Dr. Leonhart Rauwolff's Itinerary into the Eastern Countries, as Syria, Palestine, or the Holy Land, Armenia, Mesopotamia, Assyria, Chaldea, &c. Translated from the High Dutch by Nicholas Staphorst. P. 174, ff. London, 1693.

From Feluja, Rauwolff set out for Baghdad, and makes it quite clear that he must have supposed the city of Babylon to have extended far across the desert toward the Tigris, for he thus continues: "After we had travelled for Twelve Hours through desolate places, very hard, so that our Camels and Asses began to be tired under their heavy Burdens, we rested and lodged ourselves near to an ascent, we and our Beasts, to refresh ourselves, and so to stay there till Night, and to break up again in the middle thereof, that we might come to Bagdet before Sun rising. The mean while, when we were lodged there, I considered and viewed this ascent, and found that there was two behind one another, distinguished by a Ditch, and extending themselves like unto two parallel Walls a great way about, and that they were open in some Places, where we might go through like Gates; wherefore I believe, that they were the wall of the Old Town (whereof Pliny says that they were 200 Foot high, and 50 broad) that went about there, and that the places where they were open, have been anciently Gates (whereof there were a Hundred Iron ones) of that Town; and this the rather, because I saw in some places under the Sand (wherewith the two ascents were almost covered) the Old Wall plainly appear. So we found our selves to be just lodged without the walls of that formerly so famous Kingly City, which now with its Magnificence and Glorious Buildings is

quite desolated and lieth in the Dust, so that every one that passeth through it, in regard of them, hath great reason to admire with astonishment, when he considers, that this which hath been so Glorious an one, and in which the Greatest Monarchs and Kings that ever were, Nimrod, Belus, and after him King Merodach and his Posterity to Balthasar the last, have had their Seats and Habitations, is now reduced to such a Desolation and Wilderness, that the very Shepherds cannot abide to fix their Tents there to inhabit it."[1]

In 1583 the Orient was visited by John Eldred, an English traveler and merchant, whose quaint notice of Babylon and of Nineveh was among the very first hints which came directly to England concerning these great cities. His account is as follows:

"We landed at Felugia the 8th and 20th of June, where we made our abode seven dayes, for lack of camels to carie our goods to Babylon. The heat at that time of the yeare is such in those parts that men are loath to let out their camels to travell. This Felugia is a village of some hundred houses, and a place appointed for discharging of such goods as come downe the river: the inhabitants are Arabians. Not finding camels here, we were constrained to unlade our goods, and hired an hundred asses to carie our English merchandizes onely to New Babylon over a short

[1] *Op. cit.*, p. 177, f.

desert; in crossing whereof we spent eighteen houres, travelling by night and part of the morning, to avoid the great heat.

"In this place which we crossed over stood the olde mightie citie of Babylon, many olde ruines whereof are easilie to be seene by daylight, which I John Eldred have often behelde at my goode leisure, having made three voyages between the New citie of Babylon and Aleppo over this desert. Here also are yet standing the ruines of the olde tower of Babell, which being upon a plaine ground seemeth a farre off very great, but the nearer you come to it, the lesser and lesser it appeareth: sundry times I have gone thither to see it, and found the remnants yet standing about a quarter of a mile in compasse, and almost as high as the stone worke of Paules steeple in London, but it sheweth much bigger. The brickes remaining in this most ancient monument be half a yard thicke and three quarters of a yard long, being dried in the Sunne only, and betweene every course of brickes there lieth a course of mattes made of canes, which remaine sounde and not perished, as though they had beene layed within one yeere. The citie of New Babylon joyneth upon the aforesaid desert where the Olde citie was, and the river of Tygris runneth close under the wall, and they may if they will open a sluce, and let the water of the same runne round about the towne. It is about two English miles in compasse, and the inhabitants generally

speake three languages, to wit, the Persian, Arabian, and Turkish tongues: the people are of the Spanyards complexion: and the women generalie weare in one of the gristles of their noses a ring like a wedding ring, but somewhat greater, with a pearle and a Turkish stone set therein, and this they doe be they never so poore."[1]

The old confusion between Baghdad and Babylon plainly exists in the mind of Eldred,[2]

[1] *The Principall Navigations, Voiages and Discoveries of the English Nation.* By Richard Hakluyt, Master of Artes, and Student sometime of Christ-Church in Oxford. Imprinted at London by George Bishop and Ralph Newberie, Deputies to Christopher Baker, Printer to the Queen's most excellent Majestie. 1589, p. 232.

[2] Hilprecht (*Explorations in Bible Lands, during the Nineteenth Century*, p. 14, footnote 2. Philadelphia, 1903) takes exception to this statement as follows: "Rogers . . . asserts that Eldred confused Baghdad and Babylon. But this is incorrect, for Eldred says plainly enough: 'The citie of New Babylon [Baghdad] joyneth upon the aforesaid desert where the Olde citie was,' i. e., the desert between Fallûja and Baghdad which our author crossed." But surely the exception is not well taken. I can find no evidence in Eldred that he was farther south than the line between Feluja and Baghdad, and the ruins which he describes as belonging to Babylon were those which lie between these two points. I believe that Hilprecht is quite right in the suggestion that the big ruin which Eldred thought to be the Tower of Babel is really Akarkuf, which Purchase locates at seven miles from Baghdad, quite sufficiently in agreement with Hilprecht's more accurate "nine to ten miles to the west of Baghdad." It would appear then that Eldred thought the ruins of Babylon were only that short distance from the modern city of Baghdad, and therefore in the environs of the new city. This is precisely the point which my sentence is intended to make. Furthermore it would appear that Purchase thought Eldred had so located the city as appears from the following:

"For about seven or eight miles from Bagdad, as men passe from Felugia, a towne on Euphrates, whereon Old Babylon stood, to this newe citie on Tigris (a worke of eighteene houres, and about forty miles space) there is seen a ruinous shape, of a shapelesse heape and building, in circuit less than a mile, about the height of the stoneworke of Paule's steeple in London, the bricks being six inches thicke, eight broad, and a foot long (as Master Allen measured) with mats of canes

but apart from that error his words have a magical ring in them, and might well induce others to set out to see such sights. He appears not to have seen the ruins of Nineveh at all, but another Englishman, who sailed from Venice in 1599, was more fortunate and also more romantic.

There is more of eloquence in Anthony Shirley (or Sherley), who thus wrote of both cities:

"I will speake . . . of Babylon; not to the intent to tell stories, either of the huge ruines of the first Towne or the splendour of the second, but—because nothing doth impose anything in man's nature more than example—to shew the truth of God's word, whose vengeances, threatened by His Prophets, are truely succeeded in all those parts. . . .[1]

"All the ground on which Babylon was spred is left now desolate; nothing standing in that Peninsula between the Euphrates and the Tigris, but only part, and that a small part, of the greate Tower, which God hath suffered to stand (if man may speake so confidently of His greate impenetrable counsels) for an eternal testimony of His

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laid betwixt them, yet remaining as sound as if they had beene laid within a yeere's space. Thus Master Eldred and Master Fitch, Master Cartwright, also, and my friend Master Allen, by testimony of their own eyes, have reported. But I can scarce think it to be that tower or temple, because authors place it in the midst of old Babylon, and neere Euphrates; whereas this is neerer Tigris."—*Purchas his Pilgrimage*, 1626, p. 50 (folio edition).

[1] Sir Anthony Sherley, *His Relation of His Travels into Persia*. London, 1613, p. 21.

work in the confusion of Man's pride, and that Arke of Nebuchadnezzar for as perpetual a memory of his greate idolatry and condigne punishment.[1]

"Nineve, that which God Himself calleth That greate Citie, hath not one stone standing which may give memory of the being of a towne. One English mile from it is a place called Mosul, a small thing, rather to be a witnesse of the other's mightinesse and God's judgment than of any fashion of magnificence in it selfe."[1]

In these words is sounded for the first time the note which would bring eager explorers to these mounds. The former travelers had looked curiously upon these mounds and then passed on; this man saw in them facts which illustrated the Hebrew prophets. In a later day expeditions would go out from England for the very purpose of seeking in them books which might confirm or illustrate the history and the prophecy of the Hebrew people. The real force behind the large contributions of money for these explorations was this desire to know anything that had any possible bearing on the scriptures of the Old Testament. Anthony Shirley did not see that day, but he belonged to it in spirit.

In all these notices of passing travelers ignorance was mingled with credulity, and definite knowledge was wanting. The most that had been accomplished was the perpetuation and the

[1] *Ibid.*

stimulation of interest in these cities. The very small amount of progress that had been made is indicated by the publication in 1596, at Antwerp, of the great Geographical Treasury of Ortelius,[1] an alphabetic list of places, with such descriptive geographical facts added as were then known. Ortelius states that certain writers identified Nineveh with Mosul, but as he had no definite information, he had to let the matter rest at that. Of Babylon even less was known. All the authorities quoted by Ortelius, except Benjamin of Tudela, identify Babylon with Baghdad, and that position he accepts. It is clear from this that there was need for more travelers who should see, and understand as well what they saw.

A beginning is made by an English traveler, John Cartwright, whose tone is very similar to that of Shirley, though he makes more of a contribution to the knowledge of the subject:

"Having passed over this river [the Choaspes] we set forward toward Mosul, a very antient towne in this countrey, sixe dayes journey from Valdac, and so pitched on the bankes of the river Tigris. Here in these plaines of Assiria, and on the bankes of the Tigris, and in the re-

[1] *Abrahami Ortellii Antverpiani Thesaurus Geographicus Recognitus et Auctus.* Antwerp, Plantin, 1596. The copy which the writer used in the Bodleian Library had belonged to Joseph Scaliger, and contained manuscript notes of his. On Nineveh he had nothing to add, and on Babylon merely wrote in the margins some Arabic words which had been transliterated in the text of Ortelius.

gion of Eden, was Ninevie built by Nimrod, but finished by Ninus. It is agreed by all prophane writers, and confirmed by the Scriptures that this citty exceeded all other citties in circuit, and answerable magnificence. For it seemes by the ruinous foundation (which I thoroughly viewed) that it was built with four sides, but not equall or square; for the two longer sides had each of them (as we gesse) an hundredth and fifty furlongs, the two shorter sides, ninty furlongs, which amounteth to foure hundred and eighty furlongs of ground, which makes three score miles, accounting eight furlongs to an Italian mile. The walls whereof were an hundredth foote upright, and had such a breadth, as three Chariots might passe on the rampire in front: these walls were garnished with a thousand and five hundreth towers, which gave exceeding beauty to the rest, and a strength no lesse admirable for the nature of those times."[1]

After these descriptions of the past and present of Nineveh, Cartwright supplied some extracts from its history and then concluded thus:

"Finally, that this city was farre greater than Babilon, being the Lady of the East, the Queene of Nations, and the riches of the world, hauing more people within her wals, than are now in some one kingdome: but now it is destroyed (as God foretold it should be by the Chaldæans) being

[1] *The Preacher's Travels*, penned by I. C. (preface signed Iohn Cartwright). London, 1611, pp. 89, 90.

nothing else, then (sic) a sepulture of her self, a litle towne of small trade, where the *Patriarch* of the *Nestorians* keeps his seate, at the deuotion of the Turkes. Sundry times had we conference with this *Patriarch:* and among many other speeches which past from him, he wished us that before we departed, to see the Iland of Eden, but twelue miles up the riuer, *which he affirmed was undoubtedly a part of Paradise.*"

Keen as Cartwright was after historical and legendary material, he continued the error of confusion of Baghdad and Babylon. His descriptions, however, contained some new matter:

"Two places of great antiquity did we thoroughly view in the country: the one was the ruines of the old tower of *Babel,* (as the inhabitants hold unto this day) built by Nymrod, the nephew of Cham, Noahs sonne. . . .

"And now at this day that which remayneth, is called, the remnant of the tower of Babel: there standing as much, as is a quarter of mile in compasse, and as high as the stone-worke of Paules steeple in London. It was built of burnt bricke cimented and joyned with bituminous mortar, to the end, that it should not receiue any cleft in the same. The brickes are three quarters of a yard in length, and a quarter in thicknesse, and between euery course of brickes there lyeth a course of mats made of Canes and Palme-tree leaves, so fresh, as if they had beene layd within one yeere.

"The other place remarkable is, the ruines of old Babilon, because it was the first citie, which was built after the Floud. . . . This city was built upon the riuer *Euphrates,* as we found by experience, spending two dayes journey and better, on the ruines thereof.

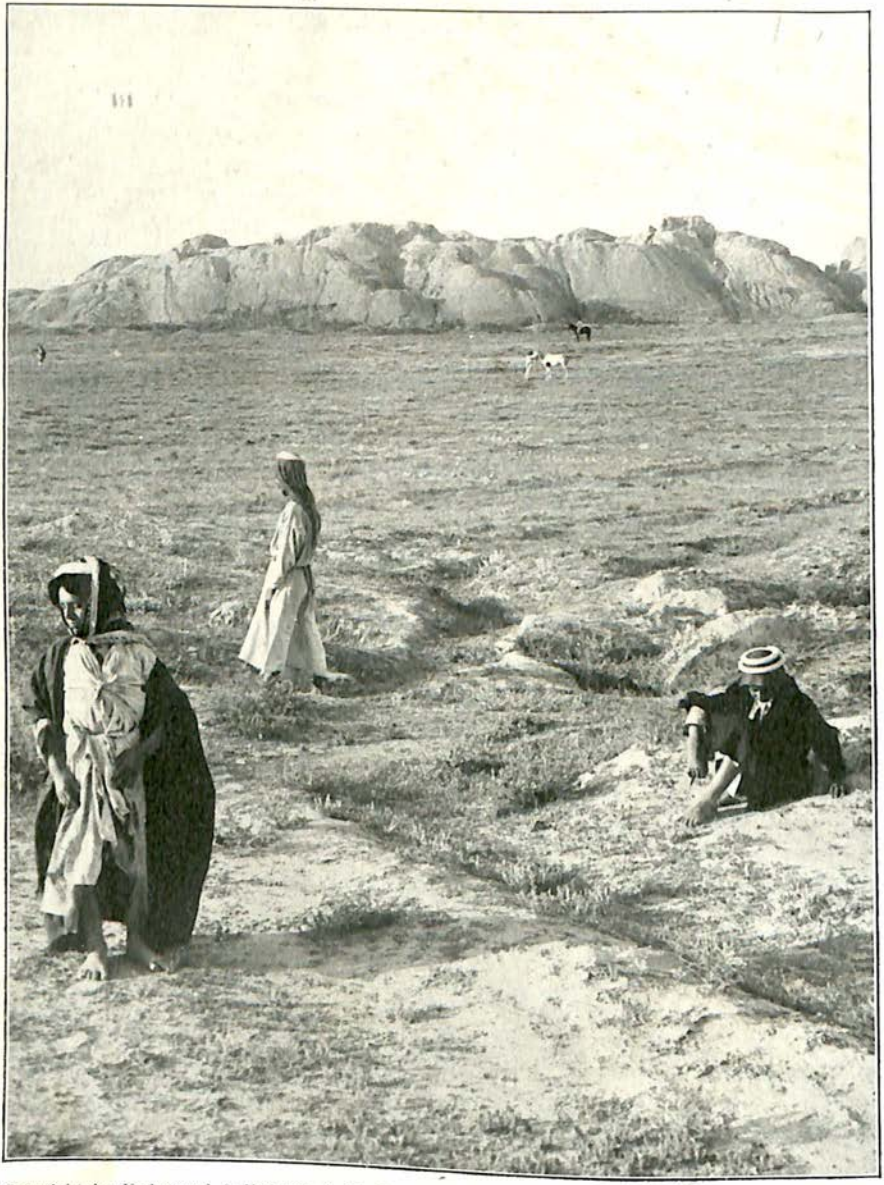
"Amongst the other stately buildings was the temple of Bel, erected by Semiramis in the middle of this citie. . . . Some do thinke, that the ruines of Nimrods tower, is but the foundation of this temple of Bel, & that therefore many trauellers haue bin deceiued, who suppose they haue seene a part of that tower which Nimrod builded. But who can tell whether it be the one or the other? It may be that confused Chaos which we saw was the ruines of both, the Temple of *Bel* being founded on that of Nimrod."[1]

There are not wanting indications in this narrative that Cartwright knew the description of Shirley, whom he almost seems to quote in the comparison with St. Paul's Cathedral.

The visiting of Babylon and Nineveh was now becoming as much of an international matter as was the observing of the ruins of Persepolis at a slightly later time. Gasparo Balbi,[2] a Venetian, Alexander Hamilton, an Englishman, and Don Garcia de Silva y Figueroa, a Spaniard, followed soon after Cartwright, but made no advance in

[1] *Ibid.*, pp. 99, 100.

[2] *Viaggio nelle Indie Orientali*, Venise, 1590. See also *Recueil des Voyages aux Indes Orientales*, par les frères de Bry. Francfort, 1660.



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The mound of Babil at Babylon. Beneath this mound, at the right hand side of the picture, are some remains of the city wall of Babylon. Beneath the rest of the mound are the yet imperfectly explored remains of a great palace of Nebuchadrezzar, which is probably that which he mentions as follows:

"Near the brick wall on the north, my heart drove me to build a palace for Babylon's defense. A palace, the counterpart of the palace of Babylon, I built there of burned bricks and asphalt. Sixty cubits long I erected a mighty wall toward Sippar, built a platform of earth . . . with asphalt and burned bricks I lifted it high like a forest mountain. Mighty cedars I caused to be stretched out for its roof."

[Nebuchadrezzar Cylinder, British Museum, 85, 4–30, 1. Col. III, line 11, ff. Langdon, *Die Neubabylonischen Königsinschriften,* pp. 118, ff.]

their investigations beyond that which had been seen by their predecessors. Following these came the great traveler, Pietro della Valle, who has received so much attention already in a former narrative concerning Persepolis.[1] He made the same mistake of confusing Baghdad with ancient Babylon, but he visited Hillah, which probably few of his predecessors had done. He also visited the great mound near Hillah, called Babil by the natives. This, Pietro della Valle believed, was the ruin of the Tower of Babel. This mound he had sketched by an artist, and from it he collected some bricks, which he afterward took back to Rome. One of these was presented to Athanasius Kircher, the Jesuit, who wrote a learned treatise on the Tower of Babel. Kircher believed that this brick had formed part of the original Tower of Babel, wrecked by the hand of God, a silent monitor from the great age of the dispersion of tongues. He placed it in his museum, and it is still preserved.[2] This is probably the very first Babylonian antiquity which came into Europe, and must always have a great interest on that account. Though it was not what Pietro della Valle and Kircher supposed, it was, nevertheless, a brick from the glorious period of Babylonian history, and to the world of letters had a meaning of tremen-

[1] See p. 21.

[2] In the old Museo Kircheriano, incorporated in 1876 with the Museo Etnografico-Preistorico, now established on the third story of the Collegio Romano in Rome.

dous import. It was the harbinger of great stores of tablets and of building bricks which were soon to flow from that land. Far beyond the dreams of the mediæval student of the Tower of Babel were this first brick and those which were to follow, to carry the thoughts of men.

After these men of the world, others bent on errands of religion passed up and down the valley—Augustinians, Jesuits, Carmelites, and Franciscans—some of whom visited the sites covered with ruins, while others were content to report what they had heard. They were generally impressed with the thought that they were in lands where God had signally manifested his displeasure with the sons of men, but none of them appear to have felt any quickening of imagination at the thought of the great deeds of human history which had there been enacted. They naturally knew no more of the meaning of the mounds than did those who had preceded them.

So the end of the seventeenth century had come, and no man knew more of the history of Babylon or of Nineveh than could be gathered out of the pages of the Greeks or the Latins, or from the stirring words of the Old Testament. The day of the traveler who went and saw, and no more, was now nearly over, and the day of the scientific explorer was rapidly hastening on. Before men should be led to dig up these great

mounds they must be roused to interest in them, and that the traveler had done in some measure. The age of the explorer and of the decipherer had come, and the intellectual quickening of the times manifested itself in a thorough study of the mounds of Nineveh and Babylon.

CHAPTER IV

EXPLORATIONS IN ASSYRIA AND BABYLONIA
1734–1820

THE man who began the new age of exploration was not himself an explorer, nor were several of his immediate successors. He was, however, a man of scientific spirit, and in that differed from the men who had gone before him. He was not seeking marvels, nor anxiously inquiring for evidences of strange dealings in dark days. He was a student of geography and history, and went into the Orient specially charged to study them. Jean Otter, member of the French Academy of Inscriptions and Belles-Lettres, and afterward professor of Arabic at the Collège de France, spent ten years in western Asia, being sent thither for the purpose of study by the Comte de Maurepas. His notice of the city of Nineveh is very different indeed from all that preceded it. Its tone of criticism, of sifting out the false from the true, is the tone of the new age that had now begun:

"Abulfeda [the Arabian Geographer] says that Nineveh was on the eastern bank of the Tigris, opposite the modern Mosul; either he must have been mistaken, or the inhabitants of the district are greatly in error, for the latter place Nineveh

on the western bank of the Tigris, on the spot which they call Eski-Mosul. If we attempt to conciliate the two opinions by supposing that Nineveh was built on both sides of the river, nothing is gained, for Eski-Mosul is seven or eight leagues higher up the stream. One point seems to favor the belief of Abulfeda, and that is, that opposite Mosul there is a place called Tell-i-Toubah—that is to say, the Hill of Repentance—where, they say, the Ninevites put on sackcloth and ashes to turn away the wrath of God."[1]

Otter also visited the mounds at Hillah, and, with a better knowledge of the Arabian geographers than any of his predecessors, located the ancient city of Babylon near Hillah. The true location of the city even he did not make out, but the site was almost determined. A scientifically trained scholar, as Otter was, had not found it, but the thoughts of men were at least pointed away from the identification with Baghdad.

After Otter, the land of Babylonia was visited by a Carmelite missionary, Father Emmanuel de Saint Albert. He saw the ruins at Hillah and made a very important report upon them to the Duke of Orleans. His account was not published, but in manuscript form came into the hands of D'Anville, who presented to the Academy of Inscriptions at Paris a paper on the site

[1] *Voyage en Turquie et en Perse*, par M. Otter, de l'Académie Royale des Inscriptions et Belles-Lettres, Paris. 1748, pp. 133, 134.

of Babylon. This paper was based, in its conclusive portions, upon the description of southern Babylonia given by Pietro della Valle, and especially that now offered by the Carmelite missionary. The words of the latter differ in important respects from the descriptions of any travelers who had preceded him. He says:

"Before reaching Hillah a hill is visible which has been formed by the ruins of some great building. It may be between two and three miles in circumference. I brought away from it some square bricks, on which were writing in certain unknown characters. Opposite this hill, and distant two leagues, another similar hill is visible, between two reaches of the river at an equal distance. . . . We went to the opposite hill, which I have already mentioned; this one is in Arabia, about an hour's distance from the Euphrates, and the other is in Mesopotamia, at the same distance from the Euphrates, and both exactly opposite to each other. I found it very like the other, and I brought away some square bricks, which had the same impressions as the first-mentioned ones. I remarked upon this hill a fragment of thick wall, still standing on the summit, which, from a distance, looked like a large tower. A similar mass was lying overturned beside it; and the cement was so solid that it was quite impossible to detach one brick whole. Both masses seemed as if they had been vitrified, which made me conclude that these

ruins were of the highest antiquity. Many people insist that this latter hill is the remains of the real Babylon; but I know not what they will make of the other, which is opposite and exactly like this one. The people of the country related to me a thousand foolish stories about these two mounds; and the Jews call the latter the prison of Nebuchadnezzar."[1]

Unlike the travelers who had preceded him, this missionary cared nothing for the marvelous, and would have none of the stories of the natives. He had, however, so completely and accurately described these ruins that the work of D'Anville was comparatively easy. He decided that this was really Babylon, and that Baghdad was not its modern representative. The final word of D'Anville is interesting, and opens up the new era of study of this part of the Orient:

"The written characters which, as Father Emmanuel says in his report, are impressed upon the bricks which remain of buildings so ancient that they may have formed part of the original Babylon would be for scholars who wish to penetrate into the most remote antiquity an entirely new matter of meditation and study."[2]

These words were written in 1755, in the very middle of the eighteenth century. They show how the study of the city of Babylon lagged be-

[1] *Mémoire sur la Position de Babylone*, par M. d'Anville. Mémoires des Inscriptions et des Belles-Lettres, t. xxviii, p. 256, année 1755 [published 1761].

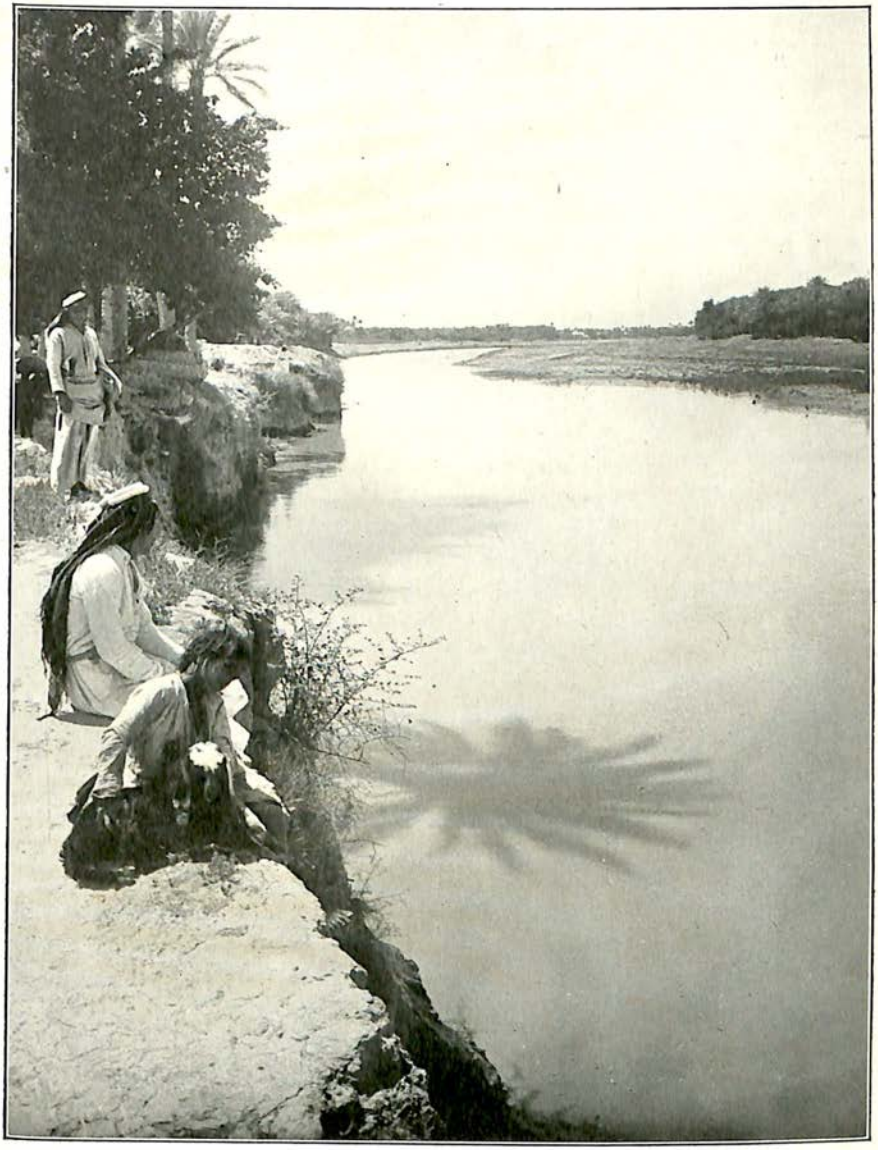
[2] Comp. trans. in Evetts, *ibid.*, p. 44.

hind the investigation of the cities of Persia. At this very time, as we have already seen, Europe was stirring with interest in the great Achæmenian dynasty, and not only was the site of Persepolis well known, its inscriptions had been several times copied, and men were eagerly trying to decipher them. It was not yet time to turn from the study of Persepolis to the study of Babylon, but the hour was rapidly hastening on. Father Emmanuel and his skillful interpreter before the Academy had done much to bring the hour nearer.

In December, 1765, Carsten Niebuhr, whose name has already filled a large place in this story in connection with the ruins of Persepolis, visited Hillah. He was absolutely certain in his own mind that these ruins belonged to the city of Babylon.[1] He was deeply impressed by their vast size, but still more by the evidences of a high state of civilization which they indicated. He found lying upon the ground and about the great mounds numerous bricks covered with inscriptions. Niebuhr could not read a line upon them, and no man living could have done so; but that they existed, and that the writing was the writing of the ancient Babylonians, was now well known in Europe. Europe had, however, entirely failed to grasp the meaning of these im-

[1] "Dass Babylon in der Gegend von Helle [Hillah] gelegen habe, daran ist gar kein Zweifel."—*Reisebeschreibung nach Arabien und andern umliegenden Landern.* Kopenhagen, 1778, ii, p. 287.

The River Euphrates South of Babylon.



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portant facts. Europe believed that a people who could only write upon clay must have been a people in a low state of civilization indeed, and must have possessed but a small literature. Niebuhr quotes from Bryant these words, and they were fairly representative of the general opinion entertained in Europe: "I cannot help forming a judgment of the learning of a people from the materials with which it is expedited and carried on, and I should think that literature must have been very scanty, or none at all, where the means above mentioned were applied." To Niebuhr such reasoning appeared to be folly. To his mind the presence of these inscribed bricks was evidence of a very high state of civilization.[1] He lamented that he could not remain longer at the site, the more thoroughly to study its ruins, and calls earnestly for others to continue the work which he had to leave unfinished.

Niebuhr also visited the mounds near the Tigris and opposite the city of Mosul. Here also he was as clear and cogent in his reasoning as he had been at Hillah. The site of Nineveh he identified without difficulty,[2] but it appears to have impressed him much less than the more ancient, and the greater, mother city of Babylon.

The hope and wish of Niebuhr that others

[1] "Man kann daraus vielmehr den Schluss machen, dass die Babylonier es in der Schreibkunst und den Wissenschaften schon sehr weit gebracht haben müssen."—*Ibid.*, pp. 290, 291.

[2] *Ibid.*, p. 353.

would soon follow him to carry on researches at Babylon were soon gratified. In 1781, on July 6, M. de Beauchamp sailed away from Marseilles to carry on astronomical observations at Baghdad and to make historical and geographical studies in the neighborhood. He visited Hillah, and contributed further to its exact localization. His knowledge of the languages and the archæology both of the past and the present of the Orient was not equal to that of Niebuhr, and he therefore made curious mistakes concerning the names which the Arabs had given to certain portions of the mounds, but withal he marks a fresh step of progress. The mound which had now long been known to travelers as the mound of Babel he now designates under the name of Makloube. For the first time he directs attention to a second mound close by the first, which he considers the site of Babylon; it is the mound called El-Kasr by the Arabs.

Of the mound at Hillah he says: "Here are found those large and thick bricks, imprinted with unknown characters, specimens of which I have presented to Abbé Bartholomy.[1] . . . I was informed by the master mason employed to dig for bricks that the places from which he procured them were large, thick walls, and sometimes chambers. He has frequently found earthen vessels, engraved marbles, and, about eight years

[1] Afterward published in beautiful copies by Millin, *Monuments Antiques inédits*. Paris, 1802, vol. ii, pp. 263, ff.

ago, a statue as large as life, which he threw amongst the rubbish. On one wall of a chamber he found the figures of a cow and of the sun and moon formed of varnished bricks. Some idols of clay are found representing human figures. I found one brick on which was a lion, and on others a half moon in relief. The bricks are cemented with bitumen, except in one place, which is well preserved, where they are united by a very thin stratum of white cement, which appears to be made of lime and sand."

"Most of the bricks found at Makloube have writing on them; but it does not appear that it was meant to be read, for it is as common on bricks buried in the walls as on those on the outside. . . .

"The master mason led me along a valley which he dug out a long while ago to get at the bricks of a wall, that, from the marks he showed me, I guess to have been sixty feet thick. It ran perpendicularly to the bed of the river, and was probably the wall of the city. I found in it a subterranean canal, which, instead of being arched over, is covered with pieces of sandstone six or seven feet long by three feet wide. These ruins extend several leagues to the north of Hella, and incontestably mark the situation of ancient Babylon. . . .

"Besides the bricks with inscriptions, which I have mentioned, there are solid cylinders, three inches in diameter, of a white substance, covered

with very small writing, resembling the inscriptions of Persepolis mentioned by Chardin. Four years ago I saw one; but I was not eager to procure it, as I was assured that they were very common. I mentioned them to the master mason, who told me that he sometimes found such, but left them among the rubbish as useless. Black stones which have inscriptions engraved on them are also met with."[1]

In these descriptions and narratives of the learned and inquiring abbé are found the first notices of excavations and the first accounts of the finding of inscriptions beyond the mere building bricks stamped with names and titles of kings. These had been seen often before and several had been taken to Europe. The period of description of mounds has now come to an end and the period of excavation has fully come. These little inscriptions which at first awakened so slight an interest in Abbé Beauchamp would soon be eagerly sought with pick and shovel. Then would come the effort to read them, and later the full knowledge of the past history of the great valley. One observation of the abbé is of great importance in this story. The cylinders, he says, were "covered with very small writing,

[1] Abbé Beauchamp made at least two visits to Hillah. The description of the first is found in *Journal des Savants*, Mai, 1785, pp. 852, ff. The second is published in *Journal des Savants*, December, 1790, pp. 2403, ff. The extracts given above are from the latter, pp. 2418, ff. This second paper is translated into English in the *European Magazine*, May, 1792, pp. 338, ff.; for extracts see pp. 240, ff.

resembling the inscriptions of Persepolis mentioned by Chardin." That showed, as by prophetic instinct, the very line which would be pursued for the decipherment of the literature of Babylon.

As definite knowledge of the site of Nineveh, as Abbé Beauchamp had achieved of the site of Babylon, was now soon secured by a French physician, Guillaume A. Olivier, who was sent into the East for the purpose chiefly of scientific study. He had no such knowledge of the ancient world as the abbé, and therefore failed to make any independent contribution to the progress of knowledge respecting Nineveh. His references to the city are scanty enough, and he does not appear to have seen any inscriptions.[1] At this time the knowledge of ancient Babylon very far exceeded the knowledge of Nineveh. It is, however, proper to say that both sites had been found, and excavations on a very small scale had been begun at Babylon. These excavations, it is true, were primarily made to obtain building material which was to be used in the construction of dwellings for the people about the neighboring country. Incidentally, however, inscriptions were found, and these were recognized as being pieces of writing from the ancient people of Babylon. Strangely enough, the first Babylonian monument of any importance

[1] *Voyage dans l'Empire Othoman, l'Egypte et la Perse*, par G. A. Olivier. Paris, an. 12, iv, pp. 283, 284 [published 1801–7].

brought to Europe came in the hands of a botanist, the distinguished Michaux, who, in 1800, brought to Paris a large and beautifully preserved Boundary Stone, or *Kudurru*, as the Babylonians called them. It found a resting place in the Cabinet de Médailles, and its strange figures of gods on the upper portion and the cuneiform writing beneath awakened great interest, though no one could read even one single character upon its dark sides.[1]

The words of Beauchamp produced an uncommon impression in Europe, and were the subject of much discussion. In England especially were men aroused by them to a sense of eager thirst for a sight of these inscriptions—the books of the Babylonians—and for an effort to read them. So soon as this desire should crystallize it was certain to result in an attempt

[1] The first announcement and brief description was given by Michaux himself in *Magasin Encyclopédique*, vi Année, Tome III (1800), pp. 86, 87, and it was first published by Millin, *Monuments Antiques inédits ou nouvellement expliqués*, I, pp. 58–68, with two beautiful plates. Paris, 1802. Professor Lichtenstein, of Helmstädt, supposed the writing was a form of Aramaic and attempted to decipher it reading from right to left. By amazing flights of imagination he turned it into Latin verse. The real sense of the mounment was secured in 1856 by Jules Oppert (*Bulletin Archéologique d'Athenaeum français*), who improved his translation after the text had been republished by Rawlinson (*Cuneiform Inscriptions of Western Asia*, I, 70). (See Oppert and Mérant, *Documents Juridiques de l'Assyrie et de la Chaldée*, pp. 85, ff. Paris, 1877), and again made a revision "in some essential points" before publishing an English translation in the *Records of the Past*, ix. London, 1878. The most recent translation is by Alfred Boissier, *Recherches sur quelques contrats babyloniens*, pp. 21–36. Paris, 1890. The document is now known to have been written during the Fourth dynasty of Babylon, the Dynasty of Isin, and quite possibly in the reign of Nebuchadrezzar I, about 1150 B. C.

Specimen illustration, slightly reduced, from Joseph Hager, *A Dissertation on the Newly Discovered Babylonian Inscriptions.* London, 1801.

to secure some of them for an English museum. The first move in this direction was made by the East India Company of London, which forwarded, on October 18, 1797, a letter to the governor of Bombay instructing him to give orders to the company's resident at Bussorah to have search made for some of these inscribed bricks. He was then to have them carefully packed and sent as soon as possible to London. Early in 1801 the first case arrived at the East India House in London. These inscriptions were the first that had reached London. It was true, indeed, that no man could read them. They stood, however, as silent monuments of the past, and their very position in London called upon men to attempt their decipherment. Their resemblance to the inscriptions of Persepolis had also been pointed out, and of that there was now no doubt. At this time the work was in progress which resulted in the reading of ancient Persian. Here were now inscriptions in ancient Babylonian, and they must also be read.

There were at last enthusiasm and real interest in Babylon. This general interest was focused by a remarkable book by Joseph Hager,[1] which was the direct result of his inspection of the

[1] *A Dissertation on the Newly Discovered Babylonian Inscriptions*, by Joseph Hager, D.D. London, 1801. This beautifully printed little volume contains five plates reproducing the Babylonian inscriptions which had been found on the East India House antiquities, or in the collections of Tassie, Cardinal Borgia, and Dr. Hulme. The reproductions have probably never been surpassed for beauty or accuracy.

Babylonian inscriptions that were now in the East India House. Hager's small book was epoch-making both in its suggestions and in its conclusions. In a few pages he reviewed the history of the observations made at Babylon, and then connected the inscribed stones there found with the Persepolitan inscriptions. His statements on these points well deserve repetition:

"It is well known that for more than a century past, about which time the *Persepolitan* inscriptions were first discovered by European travellers, the opinions have been much divided respecting these characters. Some have believed them to be *talismans*, and others the characters of the *Guebres*, or antient inhabitants of *Persia;* others held them for mere *hieroglyphics*, and others for *alphabetic* characters, like ours. KAEMPFER supposed them to express whole ideas, like the *Chinese* characters, but that they had been appropriated solely for the palace of *Istakhar*. . . .

"By the Babylonian bricks here exhibited, the whole difficulty in regard to their origin is removed; as it is evident that *Babylon*, in point of cultivation, was much earlier than *Persepolis*, and that the *Chaldeans* were a celebrated people, when the name of the Persians was scarcely known."[1]

It must be remembered that this little book of Hager was written before the Persepolis inscrip-

[1] *Ibid.*, pp. xvii, xviii.

tions had been deciphered at all, and this makes all the more remarkable the generalizations of this gifted man, who seemed to foresee the very conclusions to which men would come when both the inscriptions of Persepolis and these new texts were finally deciphered. Even beyond these deductions was Hager led to go, when he summed up his conclusions at the end of his volume,[1] for there he claimed that even the Assyrians must have used the same method of writing—and this before he had even so much as seen an Assyrian inscription of any kind.

Hager's little book had an influence out of all proportion to its size. The great tomes of many travelers had utterly failed to excite more than a passing interest. His book was soon translated into German and made a distinct impression upon Grotefend, then deeply absorbed in his efforts to decipher the records of the Achæmenian kings. In its English form it became known in France, there to inspire the archæologist, A. L. Millin, to publish in facsimile[2] a small inscribed stone brought several years before from the neighborhood of Baghdad to Paris by the bot-

[1] That these characters were the *Chaldaic* characters with which, according to ATHENÆUS, the epitaphium of SARDANAPALUS at Nineveh was engraved; the *Assyriac* characters mentioned by HERODOTUS, DIODORUS, POLYÆNUS, and other ancient authors.—*Ibid.*, p. 61. And on his title page he set Pliny's telling phrase: *Literas semper arbitror Assyrias fuisse.*

[2] *Monuments Antiques inédits ou nouvellement expliqués*, par A. L. Millin. Paris, 1802, tome i, pp. 58, sqq. *Déscription d'un monument persépolitain, qui appartient au Muséum de la Bibliothéque Nationale*, with two beautiful plates.

anist Michaux. The article of Millin called this little inscription a "Persepolitan monument," though his own statements show that it came not from from Persepolis, but from Babylonia. His copy of this beautiful little inscription was another added to the increasing list of objects which awakened in men the belief that beneath the mounds at and about Hillah must lie buried great stores of monuments of the past of Babylonia.

While these publications were appearing, and while men were still curiously examining the East India House inscriptions, a man was preparing for a work which would demonstrate the truth of these hopes and astonish the world with unsuspected discoveries.

Claudius James Rich, who had been born at Dijon, France, in 1787, but spent his childhood at Bristol, England, and there secured his earliest education, went early in life to Bombay in the service of the East India Company. Gifted extraordinarily with a love for languages and with a readiness in their acquiring, he there made himself acquainted with Latin and Greek, and especially with Hebrew, Aramæan, Persian, Arabic, and even somewhat with Chinese. Later, by fortunate accidents, he had found opportunity to continue his Oriental studies at Constantinople and at Smyrna, and then in Egypt; while a sojourn in Italy put the language of that people at his service. Before he was

twenty-four years of age he had been appointed the resident of the East India Company at Baghdad. Though he had not probably been consciously preparing for this particular post, all that he had learned and much that he had experienced now became of the greatest service to him. In the beginning of his residence at Baghdad he appears to have been most interested by the city itself and its immediately surrounding country, and began the collection of materials for a history of its Pashalic. In 1811, however, he was in some way led to visit the ruins of ancient Babylon, and at once there was awakened in him a new passion. On December 10, 1811, he saw for the first time the great mounds, to which he was now to devote so much energy and enthusiasm. His first impressions were distinctly disappointing. When he could secure the first opportunity to write them down he said:

"From the accounts of modern travelers I had expected to have found on the site of Babylon more, and less, than I actually did. Less, because I could have formed no conception of the prodigious extent of the whole ruins, or of the size, solidity, and perfect state of some of the particular parts of them; and more, because I thought that I should have distinguished some traces, however imperfect, of many of the principal structures of Babylon. I imagined, I should have said: 'Here were the walls, and such must have been the extent of the area. There stood

the palace, and this most assuredly was the tower of Belus.' I was completely deceived; instead of a few insulated mounds, I found the whole face of the country covered with the vestiges of building; in some places consisting of brick walls surprisingly fresh, in others merely of a vast succession of mounds of rubbish of such indeterminate figures, variety, and extent as to involve the person who should have formed any theory in inextricable confusion and contradiction."[1]

This first visit of Rich to Babylon was brief, for he was back again in Baghdad on December 21. In that short time, however, he had planned all the mounds, and had correctly located them by astronomical observations. He also tested the mounds by digging into them in several places, of which the following words may serve as a sufficient description:

"I went with ten men with pickaxes and shovels to make experiments on the Mujelibè; they dug into the heaps on the top, and found layers of burnt bricks, with inscriptions laid in mortar. A kind of parapet of unburnt bricks appears to have surrounded the whole. On the western face the mud bricks were not only laid on reeds, but mixed up with them. In the north-

[1] *Fundgraben des Orients, bearbeitet durch eine Gesellschaft von Liebhabern.* Wien, 1813, p. 129. The narrative of Rich extends pp. 129–162, and also pp. 197–200. The pages 129–162 are reprinted in the volume edited by his widow, *Narrative of a Journey to the Site of Babylon in 1861, now first published,* etc. London, 1839.

ern face, where a part is also still standing, the bricks are not mixed up with reeds, but only laid on layers of them; here I found some beams of the date tree, specimens of which I brought away. The part of the mud wall standing on the west front is not thick; that on the northern side is more so, but none of them are of any considerable thickness. On the north front the height of the whole pile to the top of the parapet is 132 feet. The southeast angle is higher."[1]

From these walls he took specimens of the inscribed building bricks, and likewise, when possible, purchased from the inhabitants various smaller inscriptions, which were later to form a part of the treasures of the British Museum. Rich's work at that time seemed small in amount, but it was the first serious survey of all the mounds, and has formed from that day to this the basis for every subsequent examination of them. So carefully had his work been done that he required, upon later acquaintance, to change his conclusions but slightly. His first account was, strangely enough, published in Vienna, but it was eagerly read and discussed in London. Free as it had been from theorizing, it, nevertheless, called forth a review and criticism from Major Rennell, who argued that Rich had not properly considered the allusions of classical historians and geographers, and had therefore improperly identified some ruins. Ren-

[1] *Ibid.*, p. 20.

nell's paper determined Rich to visit the ruins again, to verify or to correct his first statements. In his second visit he did find some things to correct, but in the main confirmed and established his former conclusions. The results of this visit were written out at Baghdad in the month of July, 1817, and, like the first publication of Rich, carried forward very distinctly the investigation of the ancient city.

Rich had already achieved enough to gain fame, but he was to do still more for Oriental study, not, indeed, at Babylon, but at the other chief center, the city of Nineveh. In April, 1820, he set out from Baghdad to escape its heat by a journey in Kurdistan, and this was productive of valuable results in the geography of a land then but little visited by Europeans. In this journey Mr. Rich reached Mosul on October 31, 1820, and there spent four months. The experience which had been gained in his work at Babylon was now splendidly used. He visited and sketched with plans every one of the great mounds which might be considered as forming a part of the ancient city of Nineveh. The first of these mounds to be explored was that known among the natives as Neby Yunus, because it was supposed to contain the tomb of the prophet Jonah. Here he learned that even a cursory examination by means of the spade would uncover inscriptions, and some that had been found by the natives were shown to him.

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View from Mosul, looking across the Tigris, toward the mound of Kuyunjik in the middle distance.

They were written in cuneiform characters which Rich of course could not read, but some were secured for the British Museum, where their influence would soon be felt. From Neby Yunus Rich transferred his investigations to Kuyunjik, where he surveyed the mound, drafted a plan of it, and conversed with the natives, learning from them little more than that most of the inscriptions were found at Neby Yunus.

After the investigations at these two mounds Rich went down the river and studied the mound of Nimroud, where, as the natives said, Nimrod is buried. In every Arab village which he visited Rich found inscriptions in the cuneiform character. Some which were small enough to be easily transported he purchased for his collection. Many were, however, monumental in character, being cut into stones, which the Arabs had used in the erection of their miserable hovels. Rich appears to have found no opposition among the natives to his study of the mounds, but he did find various suspicions of himself and of his motives among the more ignorant of them. In one of his tours about Mosul the remark was overheard that he was probably seeking a suitable place to plant guns and take the city. The cupidity and fear which rendered miserable the lives of later explorers did not trouble him, partly because he knew by long association the temper of the natives, and so did not unnecessarily wound their sensibilities,

and partly because he did not dig up the ground, as was necessary in the work of his successors.

The inscriptions which Rich had secured soon came to London, and there formed the nucleus of the great Assyrian and Babylonian collections of the British Museum. They showed at the very first glance that the daring guess of Hager was correct. They were indeed written in the same kind of characters as those which had been sent home to London from the ruins of Babylon. That fact alone was of so great moment as to make distinguished all the work of Rich at Nineveh. He had laid the basis for all future work in that city, as he had previously done in Babylon. His plans and drawings must be used by whoever should next take up the work.

To all this work at Babylon and at Nineveh Rich was to add useful labor at Persepolis, which he visited in August, 1821. His approach to the city was graphically described in these words:

"It was dark when we left the bridge of the Araxes. My expectation was greatly excited. Chardin, when I was a mere child, had inspired me with a great desire to see these ruins, and the desires excited in us in childhood are too vivid ever to be effaced. Their gratification has a relish which motives suggested by reason and judgment are unable afterward to equal. My late antiquarian researches had, however, also added their interest to my other inducements; and as I rode over the plain by the beautiful

starlight, reflections innumerable on the great events that had happened there crowded on my memory. I was in the moment of enjoying what I had long waited for; and what a delightful moment that is! At last the pointed summit began to detach itself from the line of the mountains to which we were advancing. Mr. Tod pointed it out: 'Under that lie the ruins.' At that moment the moon rose with uncommon beauty behind it. Ages seemed at once to present themselves to my fancy."[1]

Here at Persepolis he made more exact copies of the inscriptions to which already so much discussion had been given in Europe, and his copies proved to be of great value to those who were to engage in the criticism and the perfecting of the work of Grotefend.[2] On the way back to Baghdad from this visit to Persepolis Rich died of cholera, at Shiraz, while bravely serving others who were suffering from the disease. The man who had wrought so wonderfully for

[1] *Narrative of a Residence in Koordistan and on the Site of Ancient Nineveh*, with Journal of a voyage down the Tigris to Baghdad, and an account of a visit to Shiraz and Persepolis, by the late Claudius James Rich, Esq. Edited by his widow. Two volumes. London, 1836, vol. ii. p. 218.

[2] *Narrative of a Journey to the Site of Babylon* in 1811, now first published; Memoir on the Ruins; with engravings from the original sketches by the Author: Remarks on the topography of Ancient Babylon by Major Rennell; in reference to the Memoir; Second Memoir on the Ruins in reference to Major Rennell's Remarks: With a narrative of a journey to Persepolis: now first printed, with hitherto unpublished cuneiform inscriptions copied at Persepolis: by the late Claudius James Rich, Esq., formerly the Resident of the Hon. East India Company at Bagdad. Edited by his widow. London, 1839.

the study of the ancient world now died a hero in the humblest service for the poorest of humanity.

The impulse which Claudius James Rich gave to Babylonian and Assyrian study has never yet lost its effect. Others had done much, indeed, in awakening interest, and Rich's own testimony quoted above, shows that Chardin had done this for him; still others had made observations of lasting value, while a very few had accurately determined ancient sites, and so had made possible his work. All these things, and more, Rich had accomplished. None who preceded him had excelled him in inspirational power, for even his Journal, intended only as the basis of future careful writing, possessed it, and none had equaled him in the collecting of definite information concerning the ruins both of Nineveh and of Babylon. His quickening and informing influence worked wonders in his immediate successors.

While Rich was still living in Baghdad, surrounded by a great retinue of servants and soldiers, in the almost regal state which was then deemed necessary in order to overawe the impressible natives, he received a visit from a fellow countryman, James Silk Buckingham (1786–1855), who arrived July 16, 1816, and was greatly impressed by the state in which the mild-mannered explorer was living. It may serve to give a picture of the days and the

place to let Mr. Buckingham tell something of the life he saw:

"The only two European consulships at Baghdad are those of the English and French. The former is an appointment of the East India Company, with very handsome allowances, and is filled with great ability and dignity by their resident, Mr. Rich. The house occupied by the establishment is formed of a number of dwellings thrown into one, and, as a residence, is certainly one of the largest, best, and most commodious in the city. It consists of two large courts, one of them used as a riding ground, having numerous rooms and galleries around it, with walled terraces for sleeping at night in the open air; and a set of vaulted subterranean cellars called serdaubs, for avoiding the intense heat of the summer during the day, besides spacious and good stables, kitchens, and offices of every description.

"Attached to Mr. Rich's establishment were an English surgeon, an Italian secretary, several dragomen, or interpreters, and a number of janissaries, grooms, and servants, all filling their proper offices and performing separate duties, as in India, and composed of Turks, Arabs, Georgians, Persians, and Hindoos. A company of sepoys furnished a bodyguard, and their drums and horns sounded the regular 'reveille' and 'call' of a camp or garrison. A troop of European Hussars were formerly maintained here

also; but their numbers are diminished. A large and commodious yacht was always kept ready for excursions on the river, under the care of an Indian Serang and crew. The stud of horses was large and choice; and everything belonging to the Residency was calculated to impress ideas of great respect on the minds of the inhabitants, who were witnesses of the manner in which it was supported and conducted. The fact is, indeed, that Mr. Rich was universally considered to be the most powerful man in Baghdad, next to the Pasha; and some even questioned whether the Pasha himself would not at any time shape his conduct according to Mr. Rich's suggestions and advice, rather than as his own council might wish.

"Our mode of living here was to rise at the first peep of day, and take a ride and a bath, after which we all met at breakfast about eight o'clock. Mr. Rich then held a public divan until ten, which was regularly attended by all the officers of his own establishment, and by the heads of the chief departments of government in the city. In these visits of ceremony, everything was conducted with great decorum, and nothing could be more evident than the high degree of respect for the Resident with which these interviews inspired the visitors. On the breaking up of the divan, the members of the establishment generally retired to pass away the heat of the day in the serdaubs below; the only

places, indeed, in which existence was tolerable. At sunset, we again met together, and dined on one of the terraces in the open air; when, after continuing at table generally till ten o'clock, we separated to our beds, on other enclosed terraces, to sleep; the heat of the weather scarcely suffering us to bear the light covering of a sheet, or even the still lighter one of a mosquito muslin, though we lay on the highest part of the house-top, and had nothing above us but the starry canopy of heaven. . . .

"The state of the atmosphere at this period, as indicated by the scales of two excellent thermometers, carefully examined and compared, may be judged from the following facts: The lowest degree at which the mercury stood, at the first peep of dawn, which is generally the coldest portion of the twenty-four, was 112° of Fahrenheit; at noon it stood at 119°; at a little before two o'clock, at 122°; by sunset it subsided to 117°; and at midnight 114°. This was the case within the last twenty-four hours; the air being perfectly calm, the sun almost blood red, as seen through a dull mist, and the atmosphere literally on fire. There was, indeed, scarcely any perceptible difference between the heat of the day or that of the night, as long as the individual kept in the shade. If exposed to the sun, its rays were scarcely to be borne; natives of the country even died in great numbers from the excessive heat; and nothing but the shelter

and comforts afforded by wealth and ingenuity, in the house of the British representative, could have made a residence here at all tolerable to a European."[1]

On July 22 Buckingham set out from Baghdad, accompanied by the Italian secretary and physician of the Resident, the genial and accomplished Mr. Bellino. They visited Akarkuf, whose ruins Buckingham described very well, but did not recognize it as a Babylonian construction, and was content to reproduce Niebuhr's suggestion that this great mass of bricks burnt or unburnt may have been erected by the Califs of Baghdad or by one of the kings of Persia.

In the same company Buckingham visited the remains of Babylon, and writes: "After examining the ruined heap of the Mujellibé, and bringing away with us some fragments of hard, though apparently not furnace-burnt, bricks, with inscriptions on them, in the arrow-headed or Babylonian character, we left the pile, to extend our observations."[2]

Buckingham went very carefully over all the mounds and displays a wide acquaintance with the visits and descriptions of former travelers. He insists much on the fulfillments of Scripture prophecy which he thought he saw, and his con-

[1] J. S. Buckingham, *Travels in Mesopotamia* in two volumes. London, 1827. Vol. ii, pp. 209, ff.

[2] *Ibid.*, p. 275.

tribution to the awakening of interest in England was no mean one.

Two years later Rich had another and probably more important visit from another fellow countryman in the person of Sir Robert Ker Porter. This was October 14, 1818, and Rich had, as we have seen, made his investigations at Babylon, and published them in Europe. It was natural that he should discuss them with this newcomer. Porter had already visited Persepolis, and by the copying of inscriptions had added his name to the long and worthy line of those who had made the work of Grotefend possible. Of all those who had yet been in Babylonia none were endowed in the same manner as this new visitor. Others had possessed greater experience in travel, though even in this his experience was not small. Others had had better scientific equipment in knowledge of surveying and in acquaintance with Oriental languages. In these matters Porter was far behind Rich and the former wanderers. But Porter was an artist, a pupil indeed of Benjamin West, and he had already made his name famous in England by many a canvas depicting the glory of his country in war, and the history of his people in Church and State. To this he added the unique distinction of having been court painter at Saint Petersburg. He was born in Durham, had spent his boyhood in Edinburgh, and belonged to a brilliant Irish family. He had the Celtic poetic

temperament, was tireless and energetic, yet patient and determined, uniting in one nature qualities derived from all three portions of the United Kingdom which had made contributions to his life. A man of talent, if not even a man of genius, a man of great social following in Great Britain and in Russia, where he had entered the highest circles and even married a Russian princess (Mary, daughter of Prince Theodor von Scherbatoff)—such was Sir Robert Ker Porter. His skill as a painter admirably qualified him to sketch the ruins of Babylon, and his trained eye was ready to observe the lay of land and the external conditions of the modern surroundings of ancient sites. He had had experience in the copying of texts at Persepolis, and could now copy at Babylon with additional sureness. He had a gift for striking description in words, and his brush added vividness to his pen. Rich gave him willing assistance, and Rich's admirably trained secretary, Bellino, accompanied him to the ruins at Hillah. Though Porter was lacking in many things, his observations were useful and served well in directing later workers bent on definite work. Upon his return the account of his travels was published in sumptuous style,[1] beautifully illustrated by his own brush. The big book was received with acclaim in Eng-

[1] *Travels in Georgia, Persia, Armenia, Ancient Babylonia, etc., etc., during the years* 1817, 8, 9, *and* 20, by Sir Robert Ker Porter. In two volumes. London, 1821, 1822.

land, and apparently also on the Continent. A man with greater scientific equipment but with less social following might have written a work more valuable scientifically, which would, nevertheless, have completely failed in influence on the age. Porter's work, however, offered the needed supplement to the work of Rich. Rich had written very little indeed, and that was concerned with details, and at times was very dry indeed. It was, besides, this, not published in a complete form until after the author's death. Porter saw his own book published, and heard the popular plaudits. Here was at last a description of Babylon as it now was, duly intermingled with quotations from previous observers, and fortified by the word of Mr. Rich and Mr. Bellino. Here were pictures of mounds and ruined walls and inscribed bricks, and here was the expressed opinion that they had not yet been fully explored. What better thing could have been done for the recovery of Babylon at this time than the publication of just such a book as this of Sir Robert Ker Porter! It was impossible that its publication should not be followed by a rekindling of zeal in the pursuit of Oriental learning; or that its glowing and pictured pages should fail to excite the wonder of even the ordinary reader, who may to-morrow become an explorer himself or a patron of such pursuits in others. Just as the book of Chardin had roused the boyish enthusiasm of Rich and

sent him in his early manhood to the scenes which it described, so would this new book exert a similar influence upon others. Though its scientific contributions are not to be named with those of Rich, its popular influence was great, and it is to be ranked with the greatest of all the influences which contributed to the recovery of Nineveh and Babylon.

With the work of Sir Robert Ker Porter another period of exploration in Babylonia and in Assyria closes. The progress had been indeed very slow. The whole story is a narrative of description, rising at times to measurement and survey, and very rarely to the summit of actually recovering inscribed monuments. But all this was absolutely indispensable work. It was foundation work, preparatory and perhaps little more. But it represented a clear step forward beyond that of the days of the credulous seeker for marvels. It was, further, an era of popularization, and before governments or peoples, in monarchies or democracies, would join heartily in costly excavations, the people must get some promise of interesting result, some zeal for the learning of the past history of humanity, and some taste for the color of the Orient. In the greatest of the democracies, also, it was well that the people should come to believe that a study of the mounds of Babylon and Nineveh might give results of value to the study of their Bible, for the English people were then willing

to give much if there were promise of any such result. Of that issue assurance was given in many a word from Shirley to Rich, and that the people had heard it was soon clearly shown. In France there was probably less diffusion of popular biblical knowledge; yet from France was to come the first real step which should prove that England's hesitation had been unwise. In France that which failed in the popular interest and enthusiasm was supplied by the love of learning in the few and by the great liberality of the government, in a land where governments have always done marvels for learning. But the story of this work belongs to the new era, that now follows the period closed by two Englishmen whose names belong high up on the record—Claudius James Rich and Sir Robert Ker Porter.

CHAPTER V

EXCAVATIONS IN ASSYRIA AND BABYLONIA 1843–1854

THE period of exploration in Babylonia was succeeded by the era of excavation, but the succession was not so rapid as might have been expected. The whole history of the progress was slow, and there was now a pause before the really culminating work was begun. But this pause was full of preparation.

In 1823 Julius Mohl went from Tübingen, where he had taken in the previous year the doctor's degree, to Paris, to become the pupil of the greatest Arabist of the day, Silvestre de Sacy, whose name has already appeared in the story of decipherment. In 1840 Mohl became one of the secretaries of the Société Asiatique, and thus became permanently attached to the French capital. Though his masters had taught him the Arabic classics rather than the learning of the older Orient, he was, nevertheless, full of a desire to know of its history, language, and literature. At about the time of the pause in the progress of Babylonian exploration Mohl visited London, and there saw the inscribed Babylonian bricks which the East India Company had brought together. He was filled with

an overmastering belief that these little bricks were the promise of an immense literature which lay buried, awaiting the excavator's spade. He returned to Paris to read of mounds in Babylonia and Assyria, and to reflect upon the untold treasures which must come to light if properly sought. There was no opportunity found for Mohl himself to go to Assyria or Babylonia to seek these long-lost monuments, but there soon came a time when he could arouse another to this call.

In 1842 the French government created at Mosul a vice consulate. French commerce with the district did not warrant or demand this, and the new departure was really made in the interest of archæological study—to establish at this happily chosen place a French archæological mission. The man selected to fill the new post was admirably suited to it. Paul Emil Botta was now but thirty-seven years of age, with the full ardor of youth and the steadying influence of experience of the world. He had had service as the French consul at Alexandria, and must there have learned of the methods of archæological study in which the French had already met with distinguished success. Before Botta departed from Paris for his new post Mohl had impressed strongly upon his mind that a great opportunity was now his to *dig*, and not merely to describe, explore, and plot the mounds opposite Mosul. The preliminary work of plotting

and examining these mounds had been well done, and no more of it was needed. Rich had made it entirely unnecessary for any follower of his to repeat more of that work. It was now Botta's duty to dig beneath the surface of the oft-described mounds, and determine finally whether they covered any remains of the ancient city of Nineveh. Botta was persuaded, and went out to Mosul to occupy his consulate on May 25, 1842. That was an historic day in the annals of Assyrian study.

The French diplomat and archæologist, whose face bore the fine lines of the scholar rather than the marks of a man of the world, found himself in a place little suited to one who had lived in Paris, or even in the comparative comfort of Alexandria. Mosul was a mean little city, built more of mud than of stone, lying upon the right or western bank of the Tigris. It had once possessed an extensive commerce with the East, of which it still retained the remnants. Botta seems to have cared little for the town or its fanatical inhabitants, and were it not for the comments of Layard, we should know little of what it was at this time. Botta's own letters give it scarcely more than a passing reference. When he stood by the banks of the river Tigris he could see the river Choser discharging its sluggish and muddy waters into the great river. The eye could follow the little river back over a plain which melted away into the mountains of

Kurdistan upon the east and northeast. Upon this plain there were a few squalid villages, the homes of a peasantry more fearful of the tax-gatherer than of death. Over these the pasha of Mosul exercised a sway, patriarchal only in its severe authority. The land had once supported a vast population; of that the history left by Greeks, Romans, and Hebrews made no doubt possible. Besides these wretched villages the most noticeable objects were several vast mounds. They had been often described before, and Botta knew just what they were supposed to be. As he swept his eyes over them, the first that was noticeable was south of the Choser, on his right hand as he looked across the river. It might seem to the untrained eye at first glance merely a hill, a bit of nature's own handiwork, but the top was too flat, the sides unnaturally regular and steep. Upon its top rose a mosque, and grouped round this were several poor houses forming a little village. The mound was called Neby Yunus—that is, Prophet Jonah—and to his honor and memory the mosque was dedicated. Beneath, in the mound, lay the prophet's bones, according to the tradition of the natives. As he looked farther north on the opposite side of the Choser lay a larger mound called Kuyunjik, where also there were some human habitations. This mound was larger than the other, and beyond them was a raised line which seemed to unite these two mounds, and might mark the

remains of an ancient line of wall which inclosed them both. Farther back from the Tigris, upon the rising ground along the upper Choser and distant about fourteen miles north-northeast from Mosul, was another mound with a village called Khorsabad. Other lesser mounds were either in sight or were known from the descriptions of travelers or from native residents. Botta looked the field over and doubted where to begin. His first discouraging experience resulted from a careful survey of the town of Mosul itself. He had been led to believe that as the towns about the ruins of Babylon had been built of brick dug from the remains of the ancient city, so he would find in Mosul huts erected of bricks taken from the ancient city. His plan, therefore, was to go over Mosul and seek for signs of ancient-looking bricks, and especially for any that were inscribed with cuneiform characters. He would then ascertain from what mound these had come. To his great surprise and discomfiture, he found no such memorials of the past, and was therefore left without this hint as to the proper place to begin excavations. The mounds were so large as to discourage aimless seeking, and he began a process of questioning the natives concerning any finds that might be known. Gradually some pieces of inscribed stone were brought forth from hiding places, and these he bought from their owners. This surprising news that a man had come to Mosul who would buy old

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The Mound of Kuyunjik from the South.

stones became noised about the whole country, and he had numerous offers of bits of stone and clay. But even with all this advertising of his wishes the number of antiquities offered was much less than that which the passing traveler reported at Baghdad or at Hillah. Furthermore, it was difficult to ascertain where the natives had secured what was offered him, for they naturally desired to work these mines for their own gain and not permit the Frank to learn of their exact whereabouts. Botta's own mind swerved gradually round to the notion that the most promising mound was Neby Yunus, and he carefully considered the possibility of digging there. From this purpose he was finally dissuaded by the awkward fact that a village occupied the better part of the top of the mound, which would make digging almost impossible without the utter collapse and ruin of the miserable hovels. Besides this there were Mohammedan graves in the mound, and, above all, was not Jonah himself buried beneath its surface? To disturb a spot thus sacred would mean a revolution among the natives which might set the whole region ablaze with fanaticism. This plan was therefore abandoned and the mound by Kuyunjik was selected for the first efforts. At the western edge of this mound, near the southern extremity, a few large bricks could be seen which were joined with bitumen. These seemed to offer a hope that they belonged to some ancient building. Here,

therefore, Botta began to dig in December, 1842. His funds were very limited and he could employ but a few workmen, whose slow movements promised little results. The workmen, however, discovered some fragments of bas-reliefs and broken bits of clay inscriptions. For three months the work went on and nothing large or valuable or beautiful came out of the little ditches or wells. What was found was interesting indeed, for it offered proof positive that this mound really did cover some ancient building or buildings. It was, however, discouraging to find only broken pieces, and not complete monuments.

While this work was in progress the inhabitants gathered round the ditches and watched curiously the slow and careful work. They did not know what it all meant, but it was perfectly clear that this man was seeking inscriptions, whatever they might be. Every little fragment found which contained any of these strange little wedge-shaped marks was carefully numbered and laid aside. One of the bystanders whose home was at Khorsabad observed this proceeding, and within the first month of the excavations brought down from Khorsabad two large bricks with inscriptions, which he offered to sell to Botta. This gave him the hint that perhaps Khorsabad might be a more profitable mound for excavations. He was, however, still hopeful of success at Kuyunjik, and continued to work on. At

last, on March 20, 1843, his faith in this mound gave out, and he determined to send a few men to Khorsabad to try the mound there. It was a fortunate resolve. In three days word was brought to him at Mosul that antiquities and inscriptions had already been found. He was, however, skeptical, fearing lest the records might be some late Arabic graffiti, and was therefore unwilling to go himself lest those which had been found should prove valueless. He sent a servant with instructions to copy a few of the inscriptions and then report. The reply showed beyond a doubt that the antiquities were really Assyrian. Thereupon Botta went to the scene, to behold a sight that thrilled him.

His workmen had lighted upon a very well-preserved ancient wall, not of a city, but of a building. This they had followed round and so uncovered a large room, in which were lying fragments of sculptures, calcined by fire, together with a number of well-preserved inscriptions. The full meaning of this new room was not ascertained until long after, but some appreciation of it was Botta's own, as he looked down into the rude excavation. He believed at once that this was but one room, perhaps of a great palace, and proved the supposition by causing wells to be driven near by in several places, out of which came other bas-reliefs, almost perfectly preserved. In these his eyes looked upon a sight which no man had seen since the great royal city

fell before its enemies more than two thousand, four hundred years before. Only one day could Botta remain at Khorsabad, and then had to return to Mosul for other duties. Thence he wrote on April 5, 1843,[1] a quiet, dignified letter to the author of his first enthusiasm, M. Mohl. There is scarcely a word of enthusiasm in the letter, but it roused Mohl to contribute of his own small purse and also sent him to the Academy of Inscriptions with Botta's letter and the accompanying diagrams. Meanwhile the excavations went slowly on, though with some opposition on the part of the pasha. A month later a second and more important letter moved the French government to its old line of generous assistance to archæological research, and on May 16, 1843, three thousand francs were placed at Botta's disposal for further researches.

Thus supported by France, and cheered on by the ever-active Mohl, Botta's course seemed clear and his success certain. He was, however, sorely pressed by great difficulties. The climate was dangerous, and he almost fell a victim. The natives were suspicious beyond measure, and hampered his work at every turn. Some supposed that he was digging for buried treasure, and that these inscriptions which he copied were talismanic guardians from which he would learn

[1] *Lettres de M. Botta sur les Decouvertes à Khorsabad*, publiées par M. J. Mohl. Paris, 1845. M. Botta's *Letters on the Discoveries at Nineveh*, translated from the French by C. T. London, 1850.

its exact location. Yet others supposed that he was searching for old title deeds by which to prove that all this land had belonged to Europeans, who thus might claim its restoration. These and similar stories came to the ears of Mohammed Pasha, then governing the pashalic of Mosul, and he entered gradually upon a policy of oppression. He first set guards over Botta's workmen, whose business it was to seize any piece of metal that might be found and dispatch it to him, that it might be carefully examined to determine whether it was gold. This caused so little inconvenience to Botta that it was scarcely worth the trouble, and he soon felt compelled to resort to more strenuous measures. He had given permission to Botta to erect for himself a small hut where he might find a resting place when he came up on visits from Mosul. The wily pasha now pretended that this was in reality a fortress and that the trenches were its defenses. It was evidently Botta's intention to overawe the country by force of arms and detach it from the Sultan's dominions. Upon these representations the Sublime Porte ordered that all the excavations should at once cease. Botta was equal to the painful emergency. On October 15, 1843, he dispatched a courier to the French ambassador at Constantinople, begging him to make such representation to the Porte as might secure permission for the continuance of the excavations.

While these petitions were pending amid the usual delays at Constantinople the wily pasha was pretending to Botta that all his difficulties were due to the people of Khorsabad, and not to his own machinations. "I told him one day," says Botta, "that the first rains of the season had caused a portion of the house erected at Khorsabad to fall down. 'Can you imagine,' said he, laughing in the most natural manner and turning to the numerous officers by whom he was surrounded, 'anything like the impudence of the inhabitants of Khorsabad? They pretend that the French consul has constructed a redoubtable fortress, and a little rain is sufficient to destroy it. I can assure you, sir, that, were I not afraid of hurting your feelings, I would have them all bastinadoed till they were dead; they would richly deserve it, for having dared to accuse you.' It was in this manner that he spoke, while he himself was the author of the lie, and his menaces alone were the obstacles which prevented the inhabitants from exposing it."[1]

At Constantinople difficulties innumerable and delays uncounted were found, and not until May 4, 1844, did the firmans, allowing the work to proceed, reach Botta at Mosul. They were brought from Constantinople by M. Eugène Napoléon Flandin, an Italian painter, born in Naples, and already famous for his work in Algiers, who had been sent from Paris to copy

[1] Quoted in Bonomi, *Nineveh and Its Palaces*. London, 1852, p. 15.

and sketch all the antiquities which were too bulky or heavy to be removed. It was already decided in Paris that everything else should be carried thither.

When Botta attempted to begin excavations again he found that it would be necessary to raze the little village and thus be free to dig over the whole mound. This was accomplished by paying the inhabitants to remove to the level ground at the foot of the mound and then entering into an agreement to restore the mound's surface as it was for their rebuilding. The work now went on apace. Botta copied the inscriptions, while Flandin planned all the rooms and buildings that were found, and three hundred native laborers worked lustily with pick and shovel to lay bare this portion of the ruined city. Scores of inscriptions, chiefly upon stone and monumental in character, were now found. Great winged bulls that once had guarded palace doors came to light. Bas-reliefs of much beauty portraying scenes of peace and war arose out of dust and dirt. The success of the work passed all the hopes of Botta and all the enthusiastic predictions of Mohl, and almost exceeded the belief of the learned world in Paris. In October, 1844, Botta stopped the work and soon began to arrange for the transportation of the antiquities to Paris. The difficulties were great and the delays annoying, but at last, in December, 1846, the entire mass of material was

successfully landed at Havre, thence to be transported to Paris and deposited in the Louvre. He had evidently hoped to resume his work, for he communicated to the Academy of Inscriptions extracts from a letter which he had received from Layard, and expressed regret that he had been detained in Paris longer than he had expected.[1]

To crown the work the French government published all the drawings of Flandin, all the copies of inscriptions, and all the descriptive matter of Botta in five magnificent folio volumes,[2] in a style worthy of French traditions and of French liberality to archæological research.

So ended in a worthy publicity the first great expedition to Assyria which had succeeded in bringing to Europe the first Assyrian monuments which the Occident had ever seen. It was a noble work of Botta, of Flandin, of Mohl, and of France.

Botta would probably have gone back to Khorsabad or to some other mound in the district of Nineveh after the publication of his discoveries had he not been sent into government service elsewhere. His work might well call him to return, but another would soon continue it.

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[1] *Revue Archéologique*, IIIe année, seconde partie, pp. 791, 792. The exact date is not known, but it falls between October 15, 1846, and March 15, 1847.

[2] *Monument de Ninive découvert et décrit*, par M. P. E. Botta, mesuré et dessiné par M. E. Flandin. Ouvrage publié par ordre du gouvernement sous les auspices de M. le Ministre de l'Interieur, et sous la direction d'une Commission de l'Institut. Tomes i–v. Paris, Imprimerie Nationale, 1849—.

When Botta had departed for Europe the consulate was left in charge of M. Rouet, whose name deserves to be remembered because of a number of discoveries made, without excavation, but bearing, nevertheless, a share in the revealing of a glorious period of Assyrian history. The first of these was a great rock-cut sculpture found at Maltaï, northeast of Mosul, in which the chief gods of Assyria are represented in stately procession on the backs of animals.[1] It was also his good fortune to find at Bavian, about ten miles from Khorsabad, in the valley of Gomal, the rock-cut inscriptions of Sennacherib, which were later to serve a useful purpose in the reconstruction of his great career.

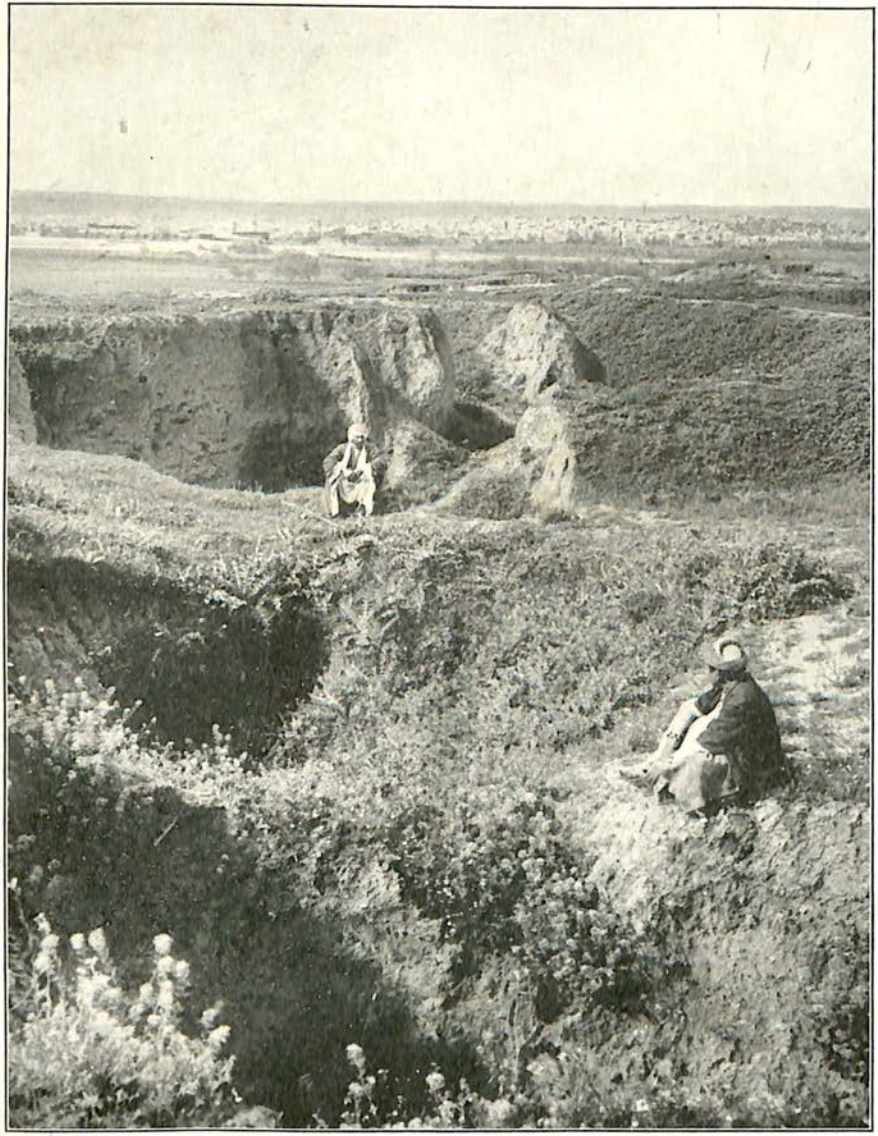
On March 5, 1817, there was born in Paris an English boy of Huguenot descent, whose early training, gathered here and there in England, France, and Italy,[2] awakened in him a love for the fine arts, an interest in archæology, and a passion for travel. In the boyish days of Austen Henry Layard his eager reading of the *Arabian Nights* was mixed with study of Fellowe's travels

[1] Lettres de M. Rouet, gérant du Consulat de Mossoul, sur les découvertes d'antiquités assyriennes. *Journal Asiatique*, Quatriéme Serie. Tome vii, p. 280, ff. Paris, 1846. The letters are three in number and are dated at Mosul, October 19, November 3, and November 17, 1845.

[2] The early life of Layard is sketched very briefly by Lord Aberdare in the introduction of the second edition of Layard, *Early Adventures in Persia, Susiana, and Babylonia*. London, 1894. It is given in full, and most entertainingly, in *Sir A. Henry Layard, Autobiography and Letters from his childhood until his appointment as H. M. Ambassador at Madrid, edited by the Hon. William N. Bruce*. In two volumes. New York, 1903.

in Asia Minor and with the perusal of Rich's accounts of discovery at Babylon and Nineveh. Rich's journal filled him with desire to see these great mounds beneath which lay ancient memorials of untold interest. Herein again, as often before, is seen the continuity of research in these lands, the influence of enthusiasm carried over from man to man.

Fortunately for science Layard's education had been too uneven to fit him for the pursuit of a profession, and the law, for which he was destined, did not awake in him an enthusiasm sufficient to overcome the early defects. The restless fever was in his blood, and the quiet ways of England were too tame for the almost Gallic spirit within him. He determined, therefore, to seek a career in Ceylon, and in 1839, when a mere boy in appearance and but twenty-two years of age, he set out to make the journey overland in company with Edward Ledwich Mitford, who was bent upon the same business. Mitford was nearly ten years older than Layard and had had experience in Morocco, where he had learned the Arabic dialect there in use. Before setting out upon this journey Layard had learned a little Arabic and Persian, and had tried to make other hasty preparations for the dangerous voyage over lands almost unknown, amid savage animals and even more savage men. Upon reaching Hamadan, Persia, Layard abandoned the plan of seeking his fortune in Ceylon,



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View from the Mound of Kuyunjik, looking across the Tigris, with the city of Mosul in the distance.

and therein archæology triumphed over commerce. Mitford pursued his way on to Ceylon, and Layard returned into western Asia.[1]

It was upon May 10, 1840, that Layard and Mitford first saw Mosul and examined somewhat curiously the mounds on the opposite bank, which Layard had learned from Rich to consider the remains of Nineveh. The mounds of Kuyunjik and Neby Yunus did not make so great an impression upon Layard as did the great mound of Nimroud, farther south. But all aroused in him a deep longing to learn their secrets. Even then he could say, "These huge mounds of Assyria made a deeper impression upon me, gave rise to more serious thought and more earnest reflection, than the temples of Baalbec or the theaters of Ionia." This spell deepened as he saw more of Nimroud by rafting down the Tigris toward Baghdad. His words are a promise of the work that was to follow:

"It was evening as we approached the spot. The spring rains had clothed the mounds with the richest verdure, and the fertile fields, which stretched around it, were covered with flowers of every hue. Amidst this luxuriant vegetation were partly concealed a few fragments of bricks,

[1] The story of Layard's early wanderings is told in *A Land March from England to Ceylon, forty years ago*, by Edward Ledwich Mitford, F.R.G.S., two volumes, London, 1884, which describes the European travels and the Oriental as far as Hamadan. The story is continued in *Early Adventures in Persia, Susiana, and Babylonia*, by Sir Henry Layard, G.C.B., two volumes, London, 1887. Mitford's book very curiously refrains from mentioning Layard's name.

pottery, and alabaster, upon which might be traced the well-defined wedges of the cuneiform character. Did not these remains mark the nature of the ruin, it might have been confounded with a natural eminence. A long line of consecutive narrow mounds, still retaining the appearance of walls or ramparts, stretched from its base, and formed a vast quadrangle. The river flowed at some distance from them, its waters, swollen by the melting of the snows on the Armenian hills, were broken into a thousand foaming whirlpools by an artificial barrier built across the stream. On the eastern bank the soil had been washed away by the current, but a solid mass of masonry still withstood its impetuosity. The Arab who guided my small raft gave himself up to religious ejaculations as we approached this formidable cataract, over which we were carried with some violence. Once safely through the danger, my companion explained to me that this unusual change in the quiet face of the river was caused by a great dam which had been built by Nimrod, and that in the autumn, before the winter rains, the huge stones of which it was constructed, squared, and united by clamps of iron, were frequently visible above the surface of the stream. It was, in fact, one of those monuments of a great people to be found in all the rivers of Mesopotamia, which were undertaken to insure a constant supply of water to the innumerable canals, spreading like

network over the surrounding country, and which, even in the days of Alexander, were looked upon as the works of an ancient nation. No wonder that the traditions of the present inhabitants of the land should assign them to one of the founders of the human race! The Arab was telling me of the connection between the dam and the city built by Athur, the lieutenant of Nimrod, the vast ruins of which were now before us—of its purpose as a causeway for the mighty hunter to cross to the opposite palace, now represented by the mound of Hammum Ali —and of the histories and fate of kings of a primitive race still the favorite theme of the inhabitants of the plain of Shinar, when the last glow of twilight faded away, and I fell asleep as we glided onward to Baghdad.

"My curiosity had been greatly excited, and from that time I formed the design of thoroughly examining, whenever it might be in my power, these singular ruins."[1]

The resolve expressed in this last sentence is very striking when one remembers that it was taken in April, 1840. This was more than two years before Botta had even seen the mounds. At least in the thought of excavation Layard

[1] *Nineveh and Its Remains;* with an account of a visit to the Chaldean Christians of Kurdistan, and the Yezidis, or Devil-worshippers; and an enquiry into the Manners and Arts of the Ancient Assyrians, by Austen Henry Layard, Esq., D.C.L. Two volumes. London, 1849, i, pp. 7, 8. This voyage is again described by Layard in his *Autobiography* (Vol. I, pp. 322, ff.), with more attention to the travel than to the ruins. He had maintained until old age a gift of vivid narration.

anticipated Botta, though the good fortune of the latter gave him the precedence in the field.

In May, 1842, Layard passed through Mosul on his way to Constantinople, and found Botta established as consular agent and already engaged in carrying on excavations at Kuyunjik. Layard was too much a man of dignity, even in his youth, to feel any envy of the fortunate Frenchman, who was now doing what he had been dreaming. In the two years which had passed Layard had attempted to secure aid to enable him to undertake just such work as this, but in vain. His own government was not as easily induced to aid archæologists as the government of France, whether monarchical or republican, has always been. Layard then formed terms of friendship with Botta, and entered upon a correspondence. Layard remembered this with much pleasure, saying of it, in the later years of his life: "My friend M. Botta had continued his excavations amongst the Assyrian ruins, and had commenced those great discoveries at Khorsabad with which his name will be ever connected, and which have given him lasting fame. With a generosity and liberality rare among discoverers, he had allowed me to see his letters to his official superiors in France, describing the remains that he had uncovered, and accompanied by copies of cuneiform inscriptions and by drawings of the bas-reliefs found in the buried palace of Sargon.

These letters were sent to the care of M. de Cadalvène, a highly accomplished French gentleman who was then at the head of the French Post-Office at Constantinople, and who, after allowing me to see them, forwarded them to their destination in France. I was, at the same time, in constant correspondence with M. Botta, who kept me fully informed of his discoveries. I was thus enabled to be among the first to announce them to the public and to give a full account of them. This I did in a series of letters to the *Malta Times*, which were republished in *Galignani's Journal* and in many European newspapers."[1] When Botta was discouraged at his small success it was Layard who wrote urging him to persevere.

At the time of this second visit to Mosul, Layard was on his way home to England. At Constantinople, however, he was detained and sent thence to Salonica upon service for the British embassy. The British ambassador at Constantinople was now Sir Stratford Canning, afterward Lord Stratford de Redcliffe, who had secured for the British Museum the marbles of Halicarnassus. The skill, patience, and ardor with which he had pursued the efforts required to obtain these had increased his own interest in the monuments of the past. To him Layard told the story of the mounds, and described his eagerness to try excavations in them. At last

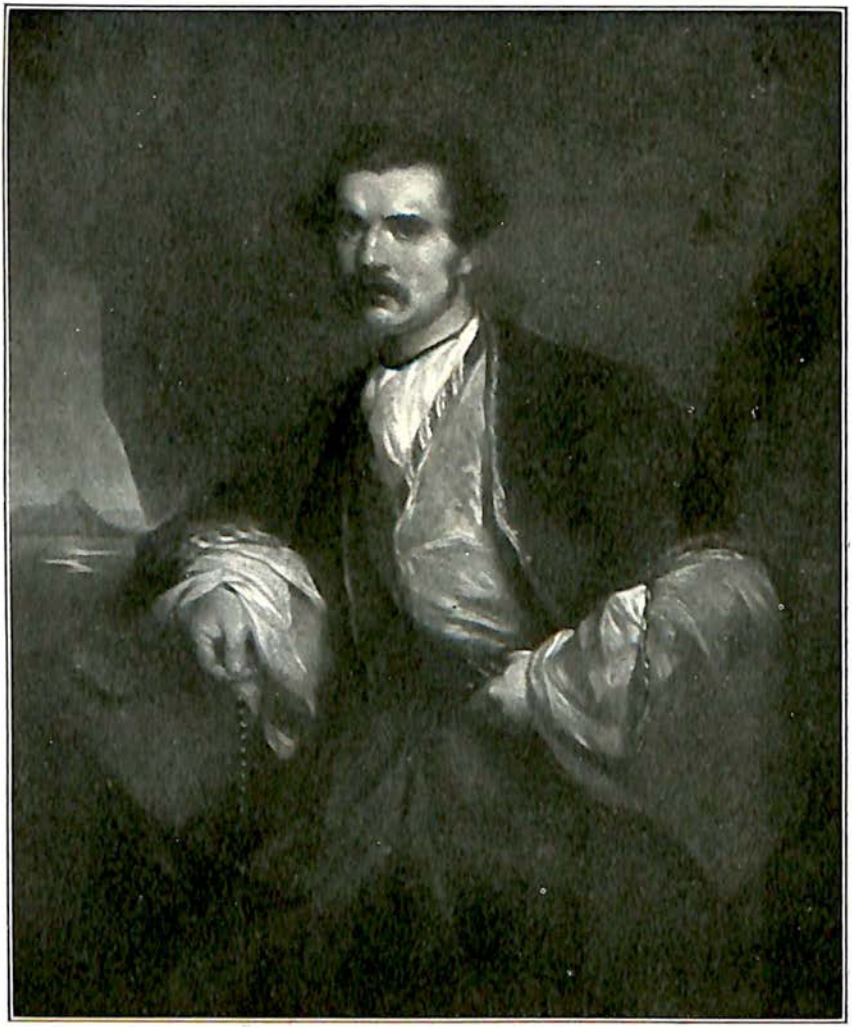
[1]Layard's *Autobiography*, ii, pp. 107, 108.

he had found the right man,[1] and Sir Stratford advanced him £60,[2] to which Layard was to add an equal amount collected among friends. With this small sum Layard left Constantinople October, 1845, and traveled with all haste to Mosul. Mohammed Pasha was now governor of the province, and from him Layard could expect no help, but every possible interference. He therefore concealed the object of his mission, but after a few days gave out that he was going to hunt wild boars, and then left Mosul by raft to float down to Nimroud, where he had determined to begin excavations. Here an Arab tent sheltered him, and hearts more tender than the pasha's watched over him. His record of the night before the first spade was struck into the ground reveals the enthusiasm of the man, and gives some clue to his great success:

"I slept little during the night. The hovel in which we had taken shelter, and its inmates, did not invite slumber; but such scenes and companions were not new to me; they could have been forgotten had my brain been less excited. Hopes long cherished were now to be realized or were to end in disappointment. Visions of palaces underground, of gigantic monsters, of sculptured figures, and endless inscriptions floated before me. After forming plan after plan for

[1] See Layard's fascinating description of this noble patron. *Autobiography*, ii, p. 29.

[2] This sum was afterward repaid by Layard from the public grants. See *Autobiography*, ii, p. 156.



Portrait of Austen Henry Layard in Albanian Dress.

[From photogravure in Sir A. Henry Layard, Autobiography and Letters, edited by the Hon. William N. Bruce. New York, 1903. Reproduced by permission of Charles Scribner's Sons.]

removing the earth and extricating these treasures, I fancied myself wandering in a maze of chambers from which I could find no outlet. Then, again, all was reburied and I was standing on the grass-covered mound. Exhausted, I was at length sinking into sleep when, hearing the voice of Awad [his Arab host], I rose from my carpet and joined him outside the hovel. The day had already dawned; he had returned with six Arabs, who agreed for a small sum to work under my directions."[1]

The excavations thus begun were carried on until December amid constant difficulties set on foot by the pasha. The plans pursued were exactly the same as were followed against Botta. When the excavations were resumed, after a visit to Baghdad, they were again interrupted by the fanaticism of the Arabs, operating upon the new governor of the province, Ismail Pasha. When they were again resumed, in February, 1846, Layard left the mound to visit a neighboring sheikh, and was returning to the mound when he observed two Arabs hastening to meet him with excited faces. The narrative of what followed is best told by Layard himself:

"On approaching me they stopped. 'Hasten, O Bey,' exclaimed one of them—'hasten to the diggers, for they have found Nimrod himself. Wallah, it is wonderful, but it is true! we have seen him with our eyes. There is no God but

[1] *Nineveh and Its Remains*, i, p. 25.

God;' and both joining in this pious exclamation, they galloped off, without further words, in the direction of their tents.

"On reaching the ruins I descended into the new trench, and found the workmen, who had already seen me as I approached, standing near a heap of baskets and cloaks. Whilst Awad advanced and asked for a present to celebrate the occasion, the Arabs withdrew the screen they had hastily constructed and disclosed an enormous human head sculptured in full out of the alabaster of the country. They had uncovered the upper part of a figure, the remainder of which was still buried in the earth. I saw at once that the head must belong to a winged lion or bull, similar to those of Khorsabad and Persepolis. It was in admirable preservation. The expression was calm, yet majestic, and the outline of the features showed a freedom and knowledge of art scarcely to be looked for in the works of so remote a period. The cap had three horns, and, unlike that of the human-headed bulls hitherto found in Assyria, was rounded and without ornament at the top.

"I was not surprised that the Arabs had been amazed and terrified at this apparition. It required no stretch of imagination to conjure up the most strange fancies. This gigantic head blanched with age, thus rising from the bowels of the earth, might well have belonged to one of those fearful beings which are pictured in the

traditions of the country as appearing to mortals, slowly ascending from the regions below. One of the workmen, on catching the first glimpse of the monster, had thrown down his basket and run off toward Mosul as fast as his legs could carry him. I learned this with regret, as I anticipated the consequences.

"While I was superintending the removal of the earth, which still clung to the sculpture, and giving directions for the continuation of the work, a noise of horsemen was heard, and presently Abd-ur-rahmar, followed by half his tribe, appeared on the edge of the trench. As soon as the two Arabs had reached the tents and published the wonders they had seen everyone mounted his mare and rode to the mound, to satisfy himself of the truth of these inconceivable reports. When they beheld the head they all cried together, 'There is no God but God, and Mohammed is his prophet!' It was some time before the sheikh could be prevailed upon to descend into the pit and convince himself that the image he saw was of stone. 'This is not the work of men's hands,' exclaimed he, 'but of those infidel giants of whom the prophet, peace be with him! has said that they were higher than the tallest date tree; this is one of the idols which Noah, peace be with him! cursed before the flood.' In this opinion, the result of a careful examination, all the bystanders concurred.

"I now ordered a trench to be dug due south from the head, in the expectation of finding a corresponding figure, and before nightfall reached the object of my search, about twelve feet distant. Engaging two or three men to sleep near the sculptures, I returned to the village and celebrated the day's discovery by a slaughter of sheep, of which all the Arabs near partook. As some wandering musicians chanced to be at Selamiyah, I sent for them, and dances were kept up during the greater part of the night. On the following morning Arabs from the other side of the Tigris and the inhabitants of the surrounding villages congregated on the mound. Even the women could not repress their curiosity, and came in crowds, with their children, from afar. My cawass was stationed during the day in the trench, into which I would not allow the multitude to descend.

"As I had expected, the report of the discovery of the gigantic head, carried by the terrified Arab to Mosul, had thrown the town into commotion. He had scarcely checked his speed before reaching the bridge. Entering breathless into the bazaars, he announced to everyone he met that Nimrod had appeared. The news soon got to the ears of the cadi, who, anxious for a fresh opportunity to annoy me, called the mufti and the ulema together to consult upon this unexpected occurrence. Their deliberations ended in a procession to the governor, and a

formal protest on the part of the Mussulmans of the town against proceedings so directly contrary to the laws of the Koran. The cadi had no distinct idea whether the bones of the mighty hunter had been uncovered or only his image; nor did Ismail Pasha very clearly remember whether Nimrod was a true believing prophet or an infidel. I consequently received a somewhat unintelligible message from his Excellency to the effect that the remains should be treated with respect, and be by no means further disturbed, and that he wished the excavations to be stopped at once, and desired to confer with me on the subject.

"I called upon him accordingly, and had some difficulty in making him understand the nature of my discovery. As he requested me to discontinue my operations until the sensation in the town had somewhat subsided, I returned to Nimroud and dismissed the workmen, retaining only two men to dig leisurely along the walls without giving cause for further interference. I ascertained by the end of March the existence of a second pair of winged human-headed lions, differing from those previously discovered in form, the human shape being continued to the waist and finished with arms. In one hand each figure carried a goat or stag, and in the other, which hung down by the side, a branch with three flowers. They formed a northern entrance into the chamber of which the lions previously de-

scribed were the southern portal. I completely uncovered the latter, and found them to be entire. They were about twelve feet in height, and the same number in length. The body and limbs were admirably portrayed; the muscles and bones, though strongly developed to display the strength of the animal, showed at the same time a correct knowledge of its anatomy and form. Expanded wings sprung from the shoulder and spread over the back; a knotted girdle, ending in tassels, encircled the loins. These sculptures, forming an entrance, were partly in full and partly in relief. The head and fore part, facing the chamber, were in full; but only one side of the rest of the slab was sculptured, the back being placed against the wall of sun-dried bricks. That the spectator might have both a perfect front and side view of the figures they were furnished with five legs; two were carved on the end of the slab to face the chamber, and three on the side. The relief of the body and three limbs was high and bold, and the slab was covered in all parts not occupied by the image with inscriptions in the cuneiform character. These magnificent specimens of Assyrian art were in perfect preservation; the most minute lines in the details of the wings and in the ornaments had been retained with their original freshness. Not a character was wanting in the inscriptions.

"I used to contemplate for hours these mysterious emblems, and muse over their intent and

history. What more noble forms could have ushered the people into the temple of their gods? What more sublime images could have been borrowed from nature by men who sought, unaided by the light of revealed religion, to embody their conception of the wisdom, power, and ubiquity of a Supreme Being? They could find no better type of intellect and knowledge than the head of the man; of strength, than the body of the lion; of rapidity of motion, than the wings of the bird. These winged human-headed lions were not idle creations, the offspring of mere fancy; their meaning was written upon them. They had awed and instructed races which flourished three thousand years ago. Through the portals which they guarded kings, priests, and warriors had borne sacrifices to their altars long before the wisdom of the East had penetrated to Greece, and had furnished its mythology with symbols long recognized by the Assyrian votaries. They may have been buried, and their existence may have been unknown, before the foundation of the Eternal City. For twenty-five centuries they had been hidden from the eye of man, and they now stood forth once more in their ancient majesty. But how changed was the scene around them! The luxury and civilization of a mighty nation had given place to the wretchedness and ignorance of a few half-barbarous tribes. The wealth of temples and the riches of great cities had been succeeded by ruins and shapeless heaps

of earth. Above the spacious hall in which they stood the plow had passed and the corn now waved. Egypt has monuments no less ancient and no less wonderful, but they have stood forth for ages to testify her early power and renown, while those before me had but now appeared to bear witness, in the words of the prophet, that once 'the Assyrian was a cedar in Lebanon with fair branches, and with a shadowing shroud of an high stature; and his top was among the thick boughs . . . his height was exalted above all the trees of the field, and his boughs were multiplied, and his branches became long, because of the multitude of waters when he shot forth. All the fowls of heaven made their nests in his boughs, and under his branches did all the beasts of the field bring forth their young, and under his shadow dwelt all great nations;' for now is 'Nineveh a desolation and dry like a wilderness, and flocks lie down in the midst of her: all the beasts of the nations, both the cormorant and bittern, lodge in the upper lintels of it; their voice sings in the windows; and desolation is in the thresholds.' "[1]

In one respect this narrative of Layard's far excels all that had been written by the men who before his day had seen or measured or worked in these mounds. None before had ever told the story of their experiences or of their discoveries in words so full of color, life, and movement;

[1] Layard, *Nineveh and Its Remains*, i, 65, ff.

none had ever displayed so much enthusiasm and so great a power of description. In another respect Layard becomes a successor of one of the earliest of English travelers and explorers. Like Shirley, he knew how to make all that he saw bear upon the words of the Bible. He could quote the very words out of the Scriptures and make the dust-covered monument reflect a bright light upon them. These two powers—the power of description in color and the power of biblical comparison—ranged all England at his back. They who cared nothing for the Bible were moved by the fire and the beauty of his description; they who loved the Bible saw in him a man who was making discoveries which promised to illustrate or confirm records to them most dear. In due time, also, these influences became so potent that the British government was moved to lend a hand to this work, and so that which had been begun upon slender private means became a great national enterprise.

The colossal figures which so deeply moved Layard were indeed a noble sight, but they were not so important as the smaller inscriptions which were later to be dug out of their resting places. Layard had supposed that the winged lions had guarded the entrance of some great temple, the spade was later to show that they had stood at the portals of the palace of Shalmaneser III.

The work which revealed these monuments

had been carried on under many difficulties and with a constant dread of interruption from the suspicious natives or their rulers. It was therefore a great relief to Layard's anxieties when he received from Constantinople a "vizirial letter, procured by Sir Stratford Canning, authorizing the continuation of the excavations and the removal of such objects as might be discovered." This put another face upon Layard's work, and enabled him to do openly work which had hitherto been carried on with as much concealment as possible. He now made some small attempts upon the mound of Kuyunjik, but his funds were extremely limited and the results were not encouraging. He therefore resumed with fresh vigor the work at Nimroud, from which he was shortly able to send a large consignment of monuments on a raft to Baghdad and thence to Bassorah, for transportation to England. Soon after which his health, already undermined by the enervating climate, compelled him to cease work and make a mountain journey for recuperation.

Upon his return to Mosul he found letters from England advising him that Sir Stratford Canning had presented to the British Museum the antiquities which had been found, and that furthermore the Museum had received from the government a grant of funds for continuing the work. This was good news indeed, though Layard had to lament that it was so much smaller

Letter written by Austen Henry Layard to Hormuzd Rassam. The allusion to Theresa is to a daughter of Rassam, god-daughter to Layard.

[Presented to Professor Rogers by Mr. Rassam.]

1, Queen Anne Street.
W.

July 14/57

My dear Hormuzd.

We shall be in London until Saturday 23d. – I shall be very glad indeed to see you and I hope you will come up to London. Just let me know the day before so that I may not be out of the way. You know that we lunch at 1½ o'clock.

I am sorry to hear that Theresa has been ill. Give her my love. In much haste

Yours sincerely

A. M. Cayan

than Botta had enjoyed, and that therefore he must stint and economize and strive to utilize every penny.

With such resources as he had the work was resumed in October, 1846, and a winter campaign was carefully planned. Huts were erected for shelter from the storms; wandering Arabs were induced to pitch their tents near by, and instead of living by plunder draw wages for labor in the trenches. Many a new plan of dealing with troublesome natives was tried and the better adopted. In all this Layard had the valuable assistance of Mr. Hormuzd Rassam, whose brother, Charles Rassam, was British vice consul at Mosul. Hormuzd Rassam was native born and understood the people as no European could hope to do. He conducted most of the dealings with them, and kept the peace without use of force.

The excavations carried on under these auspices, and with the powers which Layard then possessed, were successful beyond his wildest dreams. As the trenches followed round the walls of room after room they uncovered great slabs of alabaster, with which the chamber walls were wainscoted, and these were found to be richly carved in relief with scenes of hunting, of war, and of solemn ceremony. The very life of palace, camp, and field in Assyrian days came back again before the astonished eyes of the explorer, while these received an addition to

their verisimilitude by the discovery in some of the ruins of pieces of iron which had once formed parts of the same kind of armor as that portrayed on the reliefs, together with iron and bronze helmets, while in others were found vases and ornamentally carved pieces of ivory. Here were the pictures and there were the objects which they represented. As the trenches were dug deeper or longer monuments carved or inscribed were found daily. One trench ten feet beneath the surface uncovered the edge of a piece of black marble. It was the corner of "an obelisk about seven feet high, lying on its side." It was covered on three sides with inscriptions and with twenty small bas-reliefs. The inscriptions recorded, and the bas-reliefs illustrated, various forms of gift and tribute which had been received by Shalmaneser III, though when found these facts were of course unknown. No inscription equal in beauty and in the promise of valuable historical material had yet been found in Assyria. Layard was particularly anxious to get it away from the place lest some mishap should befall it. He therefore set Arabs to sleep and watch by it overnight and had it speedily packed for shipment.

On Christmas Day, 1846, it was sent safely away, with twenty-two other cases of antiquities, to Sir Henry Rawlinson, and through his supervision came at last to the British Museum, of whose unsurpassed collections it became one

of the chief ornaments. Within a few months after it was retrieved Rawlinson[1] was able to give a surprisingly correct survey of its chief contents, and Layard himself, when he described the results of a later expedition, was able to say of this great discovery and of the king who had caused it to be made: "He was a great conqueror, and subdued many distant nations. The names of the subject kings who paid him tribute are duly recorded on the obelisk, in some instances with sculptured representations of the various objects sent. Amongst those kings was one whose name reads 'Jehu, the son of Khumri (Omri),' and who has been identified by Dr. Hincks and Colonel Rawlinson with Jehu, king of Israel."[2]

Day after day the work went on with the regular and constant discovery of stone slabs similar to those which had been found before, and with the finding of inscribed bricks which, though not so beautiful as the stone, contained much more historical material.

When the trenches began to yield less material Layard determined to try elsewhere. Had his funds not been so severely limited, he would have continued still further the excavations at Nimroud, even though they did not appear to

[1] See *Journal of the Royal Asiatic Society*, First Series, vol. xii, pp. 401, ff. Facing the first page of this article is an excellent reproduction of one of the faces of the obelisk.

[2] Austen H. Layard, *Discoveries in the Ruins of Nineveh and Babylon*, p. 613. London, 1853.

be immediately productive. This would have been the best method of procedure, but the means would not permit it, and Layard had to seek fresh soil.

For his next adventure he chose the mound of Kalah Shergat, where he had before desired to make excavations. Out of these ruins were taken an interesting sitting figure and many small bricks with inscriptions, some of which belong to the earliest of the great Assyrian conquerors, Tiglathpileser I. But what ancient city this might be Layard was unable to ascertain. That it was none other than the city of Asshur,[1] first capital of the kingdom, was a discovery made afterward.

A few days were also given to excavation in the mound of Kuyunjik with similar good fortune, and then the work had to cease because of the consumption of the means for its carrying on. On June 24, 1847, Layard left Mosul for the land journey to Constantinople, after having sent the last of his discoveries down the Tigris.

After a few months' rest in England, devoted in considerable measure to the preparation of the narrative of his expedition and of the copies of the monuments which he had found, Layard was ordered to Constantinople to service with the British embassy. He had not been able to finish for the press the work which he had

[1] See *infra*, p. 320.

View southeast from Kuyunjik, looking toward Neby Yunus (the mound of the prophet Jonah), the mosque of which is visible with its tall minaret.

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written, and went out to his duty not knowing whether his story would awaken any interest or not. He does not appear even to have dreamed that any special call would come to him to resume the excavations again. But the books[1] were published after his departure, and at once all England rang with his praise and with an eager expression that this work must go on further. The British Museum secured more funds for the work and he was directed to set out for Assyria again. From England Hormuzd Rassam, Mr. F. Cooper, an artist, and Dr. Sandwith, a physician, were induced to accompany him. They set sail from the Bosphorus on August 28, 1849, for Trebizond, and landed there on the thirty-first day and began the journey to Mosul.

In this expedition he laid the chief emphasis upon the mound of Kuyunjik and Neby Yunus. In the former he discovered the great palace of Sennacherib, and so keen was he now become in the examination of inscriptions and tables of genealogy that he recognized the fact that this edifice belonged to the king whose son was the builder of the palace at Nimroud and whose father built the palace discovered by Botta at Khorsabad. It is to be remembered that he

[1] These books were *Nineveh and Its Remains* (see references above) and *The Monuments of Nineveh*, by Austen Henry Layard, Esq., D. C. L., London, 1849. The latter contained one hundred plates, many well executed, but far below the standard of beauty set by Botta's superb volumes.

made this conjecture without being able to read Assyrian at all. Later study has determined that he had correctly ascertained the facts. Sargon built the palace at Khorsabad; his son Sennacherib built the palace at Kuyunjik, while his son Esarhaddon erected the palace at Nimroud. Even greater than in the first expedition were his discoveries at Kuyunjik both for the history, the literature, and the art of ancient Assyria.

The greatest of these may well be told in his own words. He is describing his excavation of the southwest palace and says: "On the north side of the chamber were two doorways leading into separate compartments. Each entrance was formed by two colossal bas-reliefs of Dagon, or the fish-god. . . . The first doorway, guarded by the fish-gods, led into two small chambers opening into each other, and once panelled with bas-reliefs, the greater part of which had been destroyed. On a few fragments, still standing against the walls, could be traced a city on the shore of a sea whose waters were covered with galleys. I shall call these chambers the 'chambers of records,' for . . . they appear to have contained the decrees of the Assyrian kings as well as the archives of the empire. . . . Many inscribed tablets, from three to six inches in length, have been long preserved in England and in various European collections. The chambers I have been describing appear to have been a depository in the palace of Nineveh for such

From the northeastern corner of Kuyunjik, looking westward, with the city of Mosul in the distance.

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documents. To the height of a foot or more from the floor they were entirely filled with them; some entire, but the greater part broken into many fragments, probably by the falling in of the upper part of the building. They were of different sizes; the largest tablets were flat, and measured about 9 inches by 6½ inches; the smaller were slightly convex, and some were not more than an inch long, with but one or two lines of writing. The cuneiform characters on most of them were singularly sharp and well defined, but so minute in some instances as to be almost illegible without a magnifying glass. These documents appear to be of various kinds. Many are historical records of wars and distant expeditions undertaken by the Assyrians; some seem to be royal decrees, and are stamped with the name of a king, the son of Esarhaddon."[1]

So gravely and quietly does he record the finding of the greatest literary treasures which had, as yet, rewarded any explorer. The clue to the significance of the discovery is in the very last words, for "the son of Esarhaddon" proved to be Ashurbanipal, the last of the great Assyrian kings, and this was none other than a portion of his royal library, the rest of which was later to come into the hands of Rassam, Budge, and King.

When the excavations which yielded this

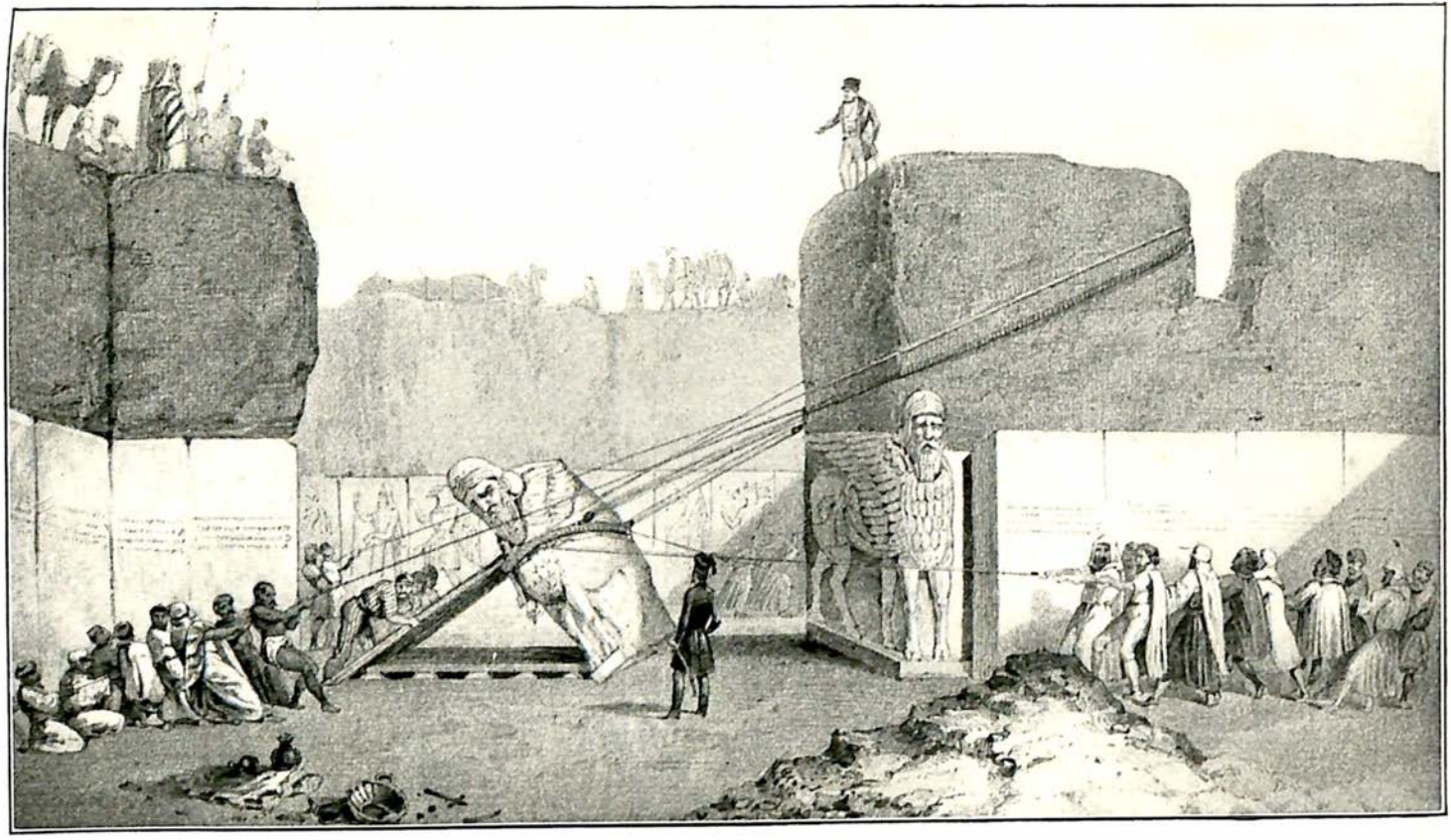
[1] Layard, *Discoveries in the Ruins of Nineveh and Babylon*, pp. 343–345. London, 1853.

glorious result had been well started, Layard and Rassam set out for Nimroud. In the little village he spent the night among the simple-hearted natives, whom he had employed upon the previous campaign, and then on the morrow he was ready to survey the scene of his labors. But his own words must tell the story: "By sunrise I was amongst the ruins. The mound had undergone no change. There it rose from the plain, the same sun-burnt yellow heap that it had stood for twenty centuries. The earth and rubbish, which had been heaped over the excavated chambers and sculptured slabs, had settled, and had left uncovered in sinking the upper part of several bas-reliefs. A few colossal heads of winged figures rose calmly above the level of the soil, and with two pairs of winged bulls, which had not been reburied on account of their mutilated condition, was all that remained above ground of the northwest palace, that great storehouse of Assyrian history and art."[1] He set the natives at work immediately upon the lower mounds, which had yielded such good results, and also upon the "high conical mound forming the northwest corner of Nimroud." By its side there came to him a surprise more cheering in its human aspects than any Assyrian discovery. "As I ascended the mound next morning I perceived a group of travelers on its summit, their horses picketed in the

[1] *Ibid.*, p. 98.

Lowering the Great Winged Bull during the excavations of Layard at Nimroud.

[From Austen Henry Layard, *Nineveh and Its Remains*. New York, 1849.]



stubble. . . . Beneath, in an excavated chamber, wrapped in his traveling cloak, was Rawlinson deep in sleep, wearied by a long and harassing night's ride. For the first time we met in the Assyrian ruins, and besides the greetings of old friendship there was much to be seen together and much to be talked over."[1] What a meeting was this, of two men whose names should forever be connected with the recovery and the explanation of this long-lost literature. Rawlinson was now on his way back to England, after an absence of twenty-two years spent in exhausting labors in the East. He had ridden at top speed from Baghdad, consumed with intense eagerness to see with his own eyes what his fortunate contemporary and friend was securing.

The results from Nimroud pale in comparison with the discovery of the library, yet they had an importance of their own. Later investigation was to show that the city of Calah lay entombed beneath the miserable huts of the people of Nimroud, and here Layard found the massive foundations of the *zikurat* or stage tower of the city. Here also were numerous small objects in metal, especially in bronze, which showed the very objects portrayed in the figures of camp and campaign life upon the palace walls.

He also conducted excavations at Kalah Sher-

[1] *Ibid.*, p. 100.

gat and Khorsabad. From Mosul he made excursions to various sites in northern and southern Babylonia. Upon these excursions he visited and for the first time described the great mound of Niffer, where a later expedition was to achieve great successes. At Hillah he made some excavations, but met with little success.

After another season he returned in April, 1852, to England. His first work was the writing of his narrative and the preparing of his inscriptions for publication.[1] He found that his previous books had made him famous, while the new discoveries would be certain to add much to his reputation. This secured for him honored diplomatic posts, notably at Constantinople, where he was able to serve Assyrian study by dealing with the Turkish government in the interest of explorers, as he had once served it by his own labors.

Layard's two expeditions to Assyria had been fruitful indeed beyond those of Botta, and their influence lived far beyond even Layard's own life. His books had, as we have already seen, touched the popular heart in many points, and, though he laid the work down to take up diplo-

[1] *Discoveries in the Ruins of Nineveh and Babylon*, with travels in Armenia, Kurdistan, and the Desert: being the result of a second expedition undertaken for the trustees of the British Museum, by Austen H. Layard, M.P. London, 1853.

A Second Series of the Monuments of Nineveh, including bas-reliefs from the palace of Sennacherib and bronzes from the ruins of Nimroud, from drawings made on the spot during a second expedition to Assyria, by Austen Henry Layard, M.P. Seventy-one plates. London, 1853.

matic service, in which he appears not to have been so happy, others were found to continue it.

Even while Layard was still at work in Nineveh the French government sent Victor Place, an architect of great skill, to hold the post of consular agent at Mosul and continue Botta's work. He had not accomplished much when Layard's work ended, but remained and made important discoveries in the department of Assyrian art, cooperating afterward with a French expedition, to which attention must later be paid.

He continued to work from 1851 to 1855 at Khorsabad, during which time he completely uncovered the palace of Sargon, which Botta had discovered. From the trenches he recovered a large number of stone sculptures and many objects of art in bronze and terra cotta. The major part of these were laden upon four *keleks*, or native sheep-skin boats, and upon one larger boat, and sent down the river. Two of the *keleks* and the larger boat were scuttled by Arabs at Kurna and the contents sunk in the river. So began ill fortune with the French expeditions, which was later to rise to a great tragedy with a larger undertaking, to which attention must later be paid. While still excavating at Khorsabad, Place explored many other mounds and left data valuable to later excavators.[1]

[1] Victor Place, *Nineve et l'Assyrie, avec des essais de restauration, par F. Thomas.* 3 volumes in folio. Paris, 1867.

Meanwhile in England interest in the whole of Babylonia and Assyria grew apace, manifesting itself in many ways. The government had been moved to assist Layard's investigations, and it now joined in the work in still another way. For a long time the frontier between Turkey and Persia had been a bone of contention, each land gaining or losing as the fortune of war might be, while predatory bands belonging neither to the one nor the other made reprisals upon both. In 1839 and 1840 war almost ensued between the two nations, whereupon England and Russia intervened, and a commission was appointed to sit at Erzerum to conduct negotiations for a peaceful settlement of difficulties. This commission, after a session lasting four years, agreed upon a treaty, the basis of which lay in a survey of the doubtful territory between the two states, and a proper delimitation of the border. This work was carried on by representatives of England, Russia, Turkey, and Persia. The most prominent of these was Colonel W. F. Williams. In January, 1849, Mr. William Kennett Loftus was sent out from England to serve as geologist upon his staff. Loftus found time amid other duties to visit large numbers of mounds in Babylonia, and the very sight of them filled him with enthusiasm. Of one, the mound of Hammam, he says:

"I know of nothing more exciting or impressive than the first sight of one of these great

Chaldean piles looming in solitary grandeur from the surrounding plains and marshes. A thousand thoughts and surmises concerning its past eventful history and origin—its gradual rise and rapid fall—naturally present themselves to the mind of the spectator. The hazy atmosphere of early morning is peculiarly favorable to considerations and impressions of this character, and the gray mist intervening between the gazer and the object of his reflections imparts to it a dreamy existence. This fairylike effect is further heightened by mirage, which strangely and fantastically magnifies its form, elevating it from the ground, and causing it to dance and quiver in the rarefied air. No wonder, therefore, that the beholder is lost in pleasing doubt as to the actual reality of the apparition before him."[1]

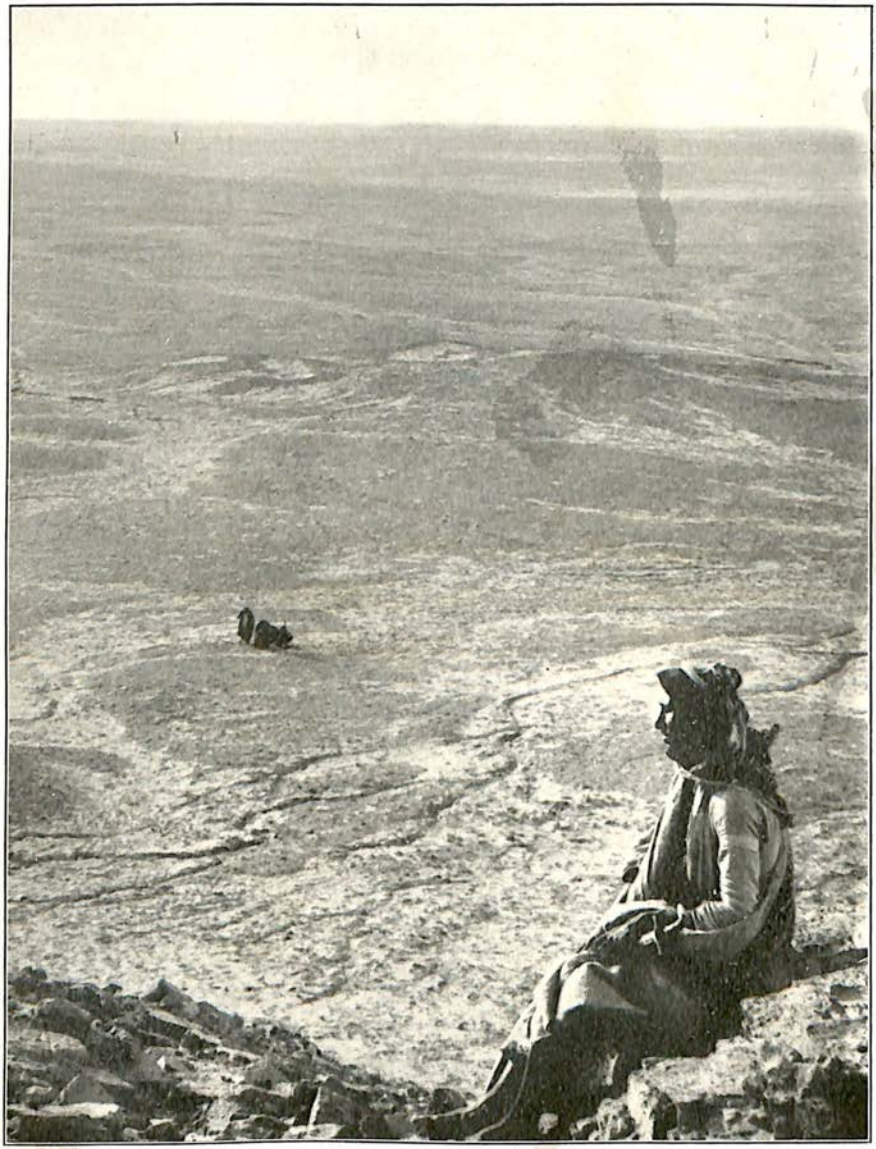
In the spring of 1850 Loftus carried on small excavations at Warka, the ancient city of Erech, but, though many interesting antiquities were found, they were not to be compared with the results of Layard's work. This was due in chief measure to the exceedingly meager means at the disposal of Loftus, and further to the great difficulties of excavating in Babylonia. Upon this first expedition Loftus rendered distinguished services by his long, and often dangerous, travels over southern Babylonia. Upon these trips he visited Niffer, Mukayyar (Mugheir), and a num-

[1] *Travels and Researches in Chaldæa and Susiana*, by William Kennett Loftus, F.G.S. London, 1857.

ber of lesser sites, most of which had never before been visited by Europeans. These he carefully described, and minutely located, rendering thereby access easy for others. Even to this present some of Loftus's work remains useful. He had also a keen eye for the peculiarities of mounds, and expressed a longing to dig in some spots which have since proved exceedingly productive. An opportunity to do some of the work he had planned was soon to come to him through private enterprise in England.

While travelers and explorers were busy among almost savage people English interest in the mounds continued, and finally eventuated in the organization of an Assyrian Excavation Fund, which undertook to gather popular subscriptions and to direct excavations in Assyria and Babylonia with the means thus acquired. At this time Sir Henry C. Rawlinson was British resident and consul-general at Baghdad, and to him was intrusted the general oversight of such excavations as might be planned and carried on. This direction could hardly have been placed in better hands. His extensive travels, and long residence in the East, and his remarkable attainments in the decipherment of ancient Persian had fitted him in the fullest degree to take charge of efforts intended to make the buried records of the great valley accessible to the world.

Loftus was sent by the fund to conduct exca-



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View from the Mound of El-Mugheir (Ur of the Chaldees), looking northwest.

vations and carry on explorations in the southern part of the country. His work was successful in bringing to London considerable numbers of inscribed tablets, with many vases, and a considerable mass of mortuary remains. It attracted, however, little popular attention, not that it was unimportant, though less in amount than Layard's, but chiefly because Loftus did not possess Layard's popular gifts, and was unable to set forth his discoveries in such attractive fashion. Had it not been for the notes which Rawlinson sent home, he would have remained almost unknown.

Rawlinson's next move was to send J. E. Taylor, British vice-consul at Bassorah, to Mugheir, the ancient Babylonian city of Ur.[1] Taylor dug straight into the center of the mound, finding almost nothing as a reward for his pains. It was rather at the southwestern corner that his great discovery was to be made. Of it he has this story to tell:

"I began excavating the southwest corner, clearing away large masses of rubbish formed of the remains of burnt, mingled with sun-dried, bricks. I worked along at a depth of 10 feet and a breadth of 6, without finding anything. I then returned, and worked a few feet north along the brick casing of the western wall; here, 6 feet below the surface, I found a perfect inscribed cylinder. This relic was in the solid

[1] See *infra*, p. 429.

masonry; it had been placed in a niche formed by the omission of one of the bricks in the layer, and was found standing on one end. I excavated some little distance further without any success, and then relinquished this corner for the north-west one. Here, also, I found a second cylinder similar to the one above mentioned, but at 12 feet from the surface. At this corner I sank a shaft 21 feet deep by 12 broad. The sun-dried bricks composing this solid mass within were here of an amazing thickness; their size was 16 inches square and 7 inches thick. Just below the cylinder were two rough logs of wood, apparently teak, which ran across the whole breadth of the shaft. . . .

"Having thus found two cylinders in the solid masonry in two corners, I naturally concluded the same objects would be found in the two corners still remaining. I sank a shaft in each, and found two other cylinders precisely in the same position, and in the same kind of structure, one at 6 and the other at 2 feet from the surface. This is easily accounted for when looking at the irregular surface of the ruin, which, at the south-east corner and south side generally, has been subject to greater ravages from rain than the other sides, owing to the greater depression of the surface toward these points."[1]

The building in which Taylor had found these

[1] "Notes on the Ruins of Muqeyer," by J. E. Taylor, Esq., *Journal of the Royal Asiatic Society*, xv, p. 263, 264.

cylinders was the temple of the god Nannar, the moon god of the Sumerians, and the cylinders were inscriptions of Nabonidus, last of the great kings of Babylon (B. C. 556–540), who had extensively restored the building, which was so ancient as to need restoration by Ur-Engur and Dungi, his son, as early as 2400 B. C.

Taylor also conducted excavations at Abu Sharein and Tel-el-Lahm, but without important results.[1]

At this time expeditions were so numerous and the work of different men in various places so constantly in progress that it is impossible to follow them in detail and almost impossible to arrange them in chronological order.

While yet Loftus was still at work, and Taylor had not even begun his labors, the French government was taking steps to resume excavations upon a large scale. It was the indefatigable Mohl who kept government and people in France ever incited to good works in this matter. At last he moved M. Leon Faucher, the minister of the interior, to ask the assembly for a credit of 70,000 francs, and on October 9, 1851, an expedition set out from Marseilles for Hillah, which was reached July 7, 1852. The members of this expedition were MM. Fulgence Fresnel, formerly consul at Jeddah, Jules Oppert, professor of German at the Lycée, Reims, and F. Thomas, an architect.

[1] *Ibid.*, pp. 404, ff.

Oppert had already done important work upon old Persian and was a trained Orientalist. He made important researches at Babylon and visited a large number of mounds, some of which Loftus had already seen. This expedition excavated at Birs Nimroud and found rich treasures of art and of inscriptions. At the same time Place was continuing excavations at Khorsabad. The materials found both by Place and by the expedition at Birs Nimroud were loaded on rafts to be floated down the river to Bassorah. Unhappily, and as it is stated by "sheer carelessness and mismanagement," the rafts were overturned on May 23, 1855, and the whole collection was lost in the river.[1] Though this sore mishap had occurred, Oppert brought back to Europe much fresh knowledge, and the published results of the expedition were notable.[2]

In the same year that the French expedition, which ended so unhappily, was being planned the trustees of the British Museum secured a grant from Parliament to begin anew the work at Nineveh. Layard was now absorbed in the diplomatic service, and would not go out to take up the work again. His former assistant was, however, now studying at Oxford, and to him the authorities appealed. To his lasting honor Mr. Hormuzd Rassam accepted the post, and

[1] *Journal of Sacred Literature*, iii, p. 471 (July, 1856).

[2] *Expédition Scientifique en Mésopotamie*, par Jules Oppert. 2 vols. Paris, 1863–1867.

set out at the end of 1852 to begin excavations at Kuyunjik, under the general direction of Sir Henry Rawlinson. Rassam was fitted for the work of excavator as few who had ever dug in these mounds. He knew land and people from his birth up; he had served a long and useful apprenticeship to Layard; he was devoted to the business he had in hand, and eager to give every energy to its successful accomplishment. In one respect he was unfortunately not so well equipped as the brilliant Oppert, who was now busy among the mounds of Babylon. Oppert knew all that was then known of the cuneiform writing, while Rassam knew nothing of the language in which the ancient records of his country were written.

When he reached Mosul he found that Sir Henry Rawlinson had drawn a line across the mound at Kuyunjik, assigning the northern half of the mound to the French and retaining the remainder for the "English sphere of influence." Place had, however, not yet dug at all in this mound, but was busy with the continuing of excavations at Khorsabad. Rassam was endowed beyond Place in a feeling for archæological investigations, and believed that the northern part of the mound was by far the most promising. From the very beginning he desired most to try excavations there, but felt himself prevented by the arrangement which Sir Henry Rawlinson had made. He concealed from Place his feelings and

went sturdily to work upon other parts of the mound. For nearly a year and a half his work continued, and from his trenches and wells there were constantly brought out inscribed records of the past, now fragments of tablets, now obelisks, now clay cylinders, and now beautifully preserved tablets, with the fine, neat writing of the ancient Assyrians. During all this time M. Place made no move toward even the beginnings of excavation at Kuyunjik, and Rassam finally concluded that, after all, Sir Henry Rawlinson had exceeded his authority in setting off a part of the mound to the French, and therefore determined, "come what might," to move over to the top of the mound and see what might be found. His first essays were to be made at night so as to prevent any possible interference by Place if it should be attempted. The story is romantic, and Rassam's own laconic sentences best describe it:

"After having waited a few days for a bright moonlight night,[1] I selected a number of my old and faithful Arab workmen who could be depended on for secrecy, with a trustworthy overseer, and gave them orders to assemble at a certain spot on the mound about two hours after sunset. When everything was ready I went and marked them three different spots on which to dig. There had been already a number of trenches dug there on a former occasion,

[1] December 20, 1853.

but at this time I directed the workmen to dig across them and go deeper down; and having superintended the work myself till midnight, I left them at work (after telling them to stop work at dawn) and went to bed.

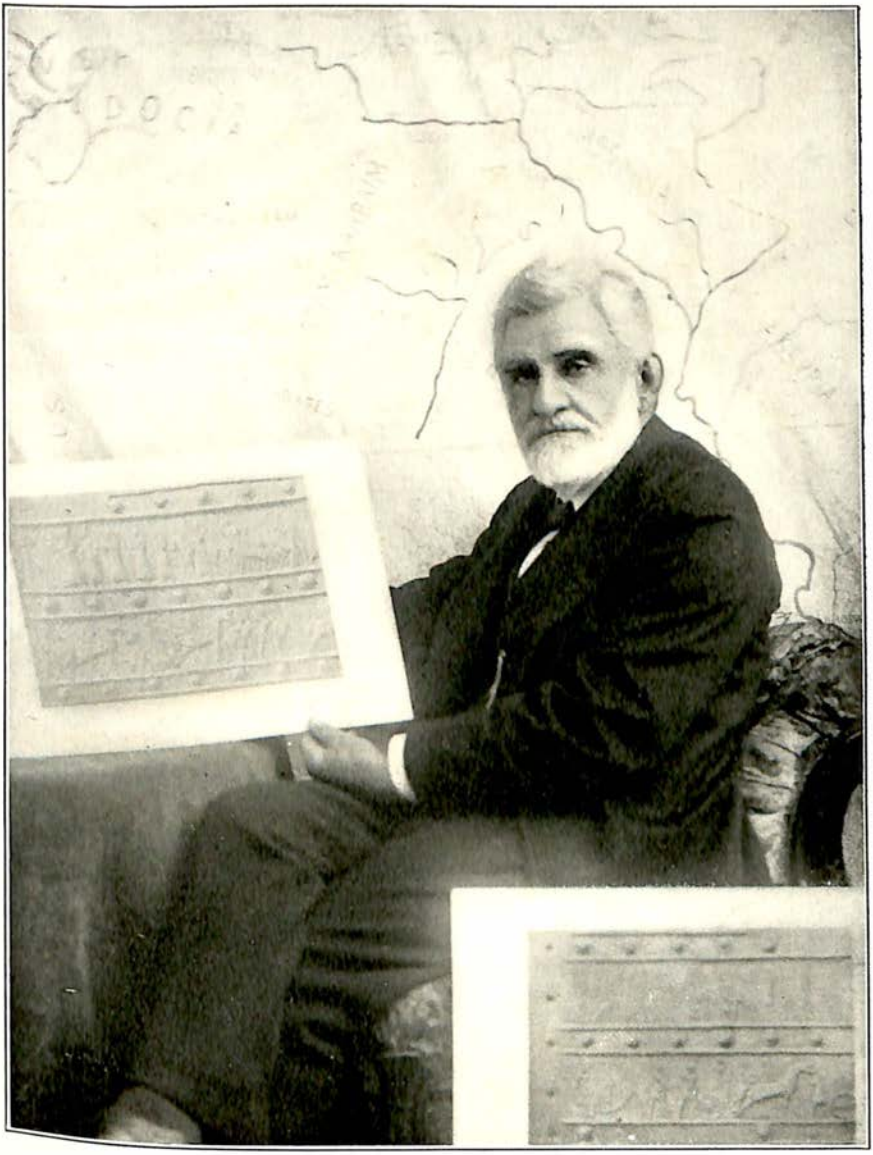
"The next morning I examined the trenches, and on seeing some good signs of Assyrian remains I doubled the number of workmen the second night and made them work hard all night. As usual, I superintended the work till midnight, and then went to bed, but had not been asleep two hours before my faithful Albanian overseer came running to give me the good tidings of the discovery of some broken sculptures. I hurried immediately to the spot, and on descending one of the trenches I could just see in the moonlight the lower part of two bas-reliefs, the upper portion having been destroyed by the Sassanians or other barbarous nations who occupied the mound after the destruction of the Assyrian empire. I could only find out this from experience, by examining the foundation and the brick wall which supported the bas-reliefs; so I directed the workmen to clear the lower part of the sculptures, which clearly showed that the slabs belonged to a new palace; but on digging around them we came upon bones, ashes, and other rubbish, and no trace whatever was left of any other sculptures. On the third day the fact of my digging at night oozed out in the town of Mosul, which

did not surprise me, seeing that all the families of the workmen who were employed in the nocturnal work knew that they were digging clandestinely somewhere; and, moreover, the workmen who were not employed at night must have seen their fellow-laborers leaving their tents and not coming to work the next day. Not only did I fear the French consul hearing and coming to prevent me from digging in what he would call his own ground, but, worse than all, that it should be thought I was digging for treasure by the Turkish authorities and the people of Mosul, who had always imagined that we were enriching ourselves by the discovery of fabulous treasures; consequently, on the third night, I increased the workmen, and resolved to remain in the trenches till the morning, superintending the work. It can be well imagined how I longed for the close of the day, as there was no doubt in my mind that some Assyrian structure was in existence near those broken slabs which had been found the night before. I was not disappointed in my surmises, for the men had not been at work three hours on the third night before a bank under which they were digging fell and exposed a most perfect and beautiful bas-relief, on which was represented an Assyrian king (which proved afterward to be Assurbanipal or Sardanapalus) in his chariot hunting lions. The delight of the workmen was past all bounds; they all collected

Hormuzd Rassam

Explorer, Excavator

Born in Mosul (1826) of a Chaldean Christian family, after working with Layard in the Assyria he was interpreter for the British resident in Aden (1854), and in 1864 was sent by the British government as Plenipotentiary to King Theodore of Abyssinia, who imprisoned him two years. After further archæological work he lived in retirement in Brighton, England, and there died September 20, 1910.



Yours sincerely
H. Rapkin

and began to dance and sing from their inmost heart, and no entreaty or threat of mine had any effect upon them. Indeed, I did not know which was most pleasing, the discovery of this new palace or to witness the joy of my faithful and grateful workmen. We kept on working till morning, and seeing that by this time three perfect sculptures had been uncovered, I had no doubt in my mind that this was quite a new palace. The night workmen were changed, and new hands put to work in the daytime, as I had now no more fear of being thwarted by my rivals, because, according to all rules, I had secured this palace for the British nation. During the day we cleared out all the lion-hunt room of Assurbanipal, which is now in the basement room of the British Museum. In the center of this long room or passage there were heaps of inscribed terra cottas, among which I believe was discovered the famous Deluge Tablet. Undoubtedly this was the record chamber of Assurbanipal."[1]

The discovery thus made was the greatest which had yet been made either in Assyria or Babylonia. Rassam, by the exercise of a skilled judgment and the fortunate combination of circumstances, had actually uncovered another portion of the long-buried library of the royal city

[1] *Excavations and Discoveries in Assyria*, by Hormuzd Rassam, *Transactions of the Society of Biblical Archæology*, vii, pp. 39–41. Rassam has told the story again in *Asshur and the Land of Nimrod* (New York, 1897), pp. 24, ff.

of Nineveh—the library which Assurbanipal had gathered or caused to be copied for the learning of his sages. Here was a royal storehouse of literature, science, history, and religion brought to light, ready to be studied in the West, when the method of its reading was fully made out. Well might Rawlinson join with Layard in applause over this happy and fortunate discovery, which had linked Rassam's name forever with the history of Assyrian research.

In March, 1854, Rassam returned to England, and Loftus, who had finished his researches in the south, was sent to Kuyunjik to complete Rassam's work. This task he fulfilled with complete success, recovering many more tablets, to be sent, as Rassam's were, to the British Museum.

While these works were in progress the East India Company again took part, in a most valuable manner, in the work of Assyrian study. On the request of the trustees of the British Museum the company dispatched Commander Felix Jones, assisted by Dr. J. M. Hyslop, from Baghdad to Mosul to survey the whole Nineveh district. This was accomplished in a masterly fashion during the month of March, 1862, and three great maps were published, which remain the standard records until to-day.[1]

[1] "Topography of Nineveh," illustrative of the maps of the chief cities of Assyria; and the general geography of the country intermediate between the Tigris and the upper Tab, by Felix Jones, Commander

And now the long and brilliant series of excavations was drawing near to another period of rest. But at the very end Sir Henry Rawlinson was the author of a remarkable discovery. During the months of August and September, 1854, he had placed "an intelligent young man, M. Joseph Tonetti by name," in charge of excavations at Birs Nimroud, where the ill-fated French expedition had carried on its work. For two months the work was not very successful, and then Sir Henry Rawlinson visited the works in person, and after some examination determined to break into the walls at the corners, in the hope of finding commemorative cylinders, such as Taylor had found at Mugheir. He first directed the removal of bricks down to the tenth layer above the plinth at the base, and while this was being done busied himself elsewhere. When this had been finished he was summoned back, and thus described the happy fortune which ensued:

"On reaching the spot I was first occupied for a few minutes in adjusting a prismatic compass on the lowest brick now remaining of the original angle, which fortunately projected a little, so as to afford a good point for obtaining the exact magnetic bearing of the two sides, and I then ordered the work to be resumed. No sooner had the next layer of bricks been removed than the

Indian Navy, and Surveyor in Mesopotamia. [With three large folded maps.] *Journal of the Royal Asiatic Society*, xv, pp. 297, ff.

workmen called out there was a *Khazeneh*, or 'treasure hole'—that is, in the corner at the distance of two bricks from the exterior surface there was a vacant space filled up with loose, reddish sand. 'Clear away the sand,' I said, 'and bring out the cylinder;' and as I spoke the words the Arab, groping with his hand among the débris in the hole, seized and held up in triumph a fine cylinder of baked clay, in as perfect a condition as when it was deposited in the artificial cavity above twenty-four centuries ago. The workmen were perfectly bewildered. They could be heard whispering to each other that it was *sihr*, or 'magic,' while the gray-beard of the party significantly observed to his companion that the *compass*, which, as I have mentioned, I had just before been using, and had accidentally placed immediately above the cylinder, was certainly 'a wonderful instrument.' "[1]

The cylinder thus recovered was one of four originally set in four corners of the building, and a little later a second was found. The remaining two were not recovered, as the corners in which they had presumably been placed had long before been broken down. Nebuchadrezzar had taken great pains to preserve the records of his great works of building and restoration.

And now the long series of excavations was

[1] "On the Birs Nimroud; or, The Great Temple of Borsippa," by Sir Henry Rawlinson, K.C.B., *Journal of the Royal Asiatic Society*, xviii (1860), pp. 2, ff. [This paper was read January 13, 1855.]

ended. Men of learning in the history of the ancient Orient had been overwhelmed by the mass no less than by the startling character of the great discoveries. The spade and the pick might now be suffered to lie idle and rust for several years. There was great work to do in the reading of these long-lost books. Europe waited for the results before beginning new excavations.

CHAPTER VI

THE DECIPHERMENT OF SUSIAN (ELAMITE) AND ASSYRIAN

WHEN the masters of decipherment, Grotefend, Rawlinson, and Hincks, had brought to happy conclusion the reading of the ancient Persian inscriptions which had been copied at Persepolis, Behistun, and other less important sites, they were still confronted by a great series of problems.

Many of these inscriptions were threefold in form, and, as has already been shown, it was now generally believed that they represented three separate languages. The first was now read, and it was ancient Persian. The second called for attempts at its decipherment. None knew what people these were whose language appeared side by side with ancient Persian, and opinion now called them Scythians, and now Medes. But whatever their language might be named, some one must essay its decipherment. In reality a number of men in different places were at work simultaneously upon the fascinating problem. It was to be expected that Grotefend would attempt the task, and this he did, but, unfortunately, without complete success.

He was, indeed, hardly fitted by his training for work of this kind. The great achievement of really beginning this decipherment was reserved for Niels Louis Westergaard, whose very first paper[1] laid the foundations for the successful reading of the second class of Persepolitan writing. His method was very similar to that used by Grotefend in the decipherment of Persian. He selected the names for Darius, for Hystaspes, for the Persians, and for other nationalities, and compared them with their equivalents in the Persian texts. By this means he learned a number of the signs and sought by their use in other words to spell out syllables or words, whose meanings were then ascertained by conjecture and by comparison. He estimated the number of separate characters at eighty-two or eighty-seven, and judged the writing to be partly alphabetical and partly syllabic. The language he called Median, and classified it in the "Scythian," rather than the "Japhetic," family. But Westergaard's results were tentative at the best, and needed the severe criticisms of another mind. These they obtained in two papers by Dr. Hincks, read before the Royal Irish Academy.[2] Hincks clearly advanced upon Westergaard,

[1] "Zur Entzifferung der Achämenidischen Keilschrift zweiter Gattung," von N. L. Westergaard, *Zeitschrift für die Kunde des Morgenlandes*, vi, pp. 337, ff. (1844).

[2] On the first and second kinds of Persepolitan writing, by the Rev. Edward Hincks, D.D., *Transactions of the Royal Irish Academy*, xxi, 114, ff. On the three kinds of Persepolitan writing, and on the Babylonian lapidary characters, *ibid.*, pp. 233–248.

and again, as before, showed himself a master of all the processes of cuneiform decipherment.

After Westergaard and Hincks the work was taken up by a French scholar, F. de Saulcy, who was able to see farther than either, though it must also be admitted that he introduced a number of mistakes, chiefly perhaps because he had no access to the papers of Hincks, for Saulcy read with success only about thirty-one signs, while Hincks had identified with reasonable approximation forty-eight signs out of the one hundred and thirteen in which the language is written. De Saulcy looked back upon the decipherment of ancient Persian and compared the signs of the Median language, for so he also named this second language. He observed that they were similar, then he looked ahead and saw that they appeared almost identical with the characters in the third language, to which he gave the name *Assyrian*. De Saulcy was not the first to give this title to the third form of writing found at Persepolis—that designation was now becoming common—but he was the first to point out the remarkable resemblance between the signs or characters in the second and third groups of the text. It was now clearer than ever that if the second language, whatever it was, whether Median or Scythian, could be deciphered, the way would be open to the reading of Assyrian. To this great end de Saulcy

contributed by his increased success in the study of Median.

All three, Westergaard, Hincks, and de Saulcy, had done their work with very defective materials. It was very improbable that the study of the Median or Scythian would get beyond de Saulcy's attempts without the publication of fresh material. This was soon forthcoming, through the generosity of Sir Henry Rawlinson. At great personal cost of money, time, and dangerous labor he had completed the copy of the inscription at Behistun. The first column was in ancient Persian, and in the decipherment of this he had won imperishable fame. The second column he had not time to publish at once himself, and therefore gave it over to Mr. Edwin Norris, with full permission to use it as he wished. Norris, leaning in the beginning strongly upon Westergaard, succeeded in deciphering almost all of it. His paper, read before the Royal Asiatic Society of London on July 3, 1852,[1] was almost epoch-making in the history of the study, and it was long before it was superseded.

His predecessors had supposed that the language was written with eighty-two signs, but his greater range of material enabled him to raise the number to one hundred and three, of which he succeeded in giving reasonably correct values

[1] "Memoir on the Scythic Version of the Behistun Inscription," by Mr. E. Norris, *Journal of the Royal Asiatic Society*, xv, pp. 1–213; addenda, pp. 431–433.

to fifty-seven. Perhaps his most striking single contribution was the recognition in the fullest degree of the syllabic character of the language. "Each character," he says, "represents a syllable which may be either a single vowel or a consonant and vowel, or two consonants with a vowel between them."[1] In the effort to classify the language in some relationship with known tongues Norris was the first to claim that it bears closest resemblance to the Volga-Finnish branch of the Scythic family, and is quite similar to the modern speech of Finland. He made a systematic presentation of the grammar, and with the help of Rawlinson's translation of the Persian he gave a rendering of the Median which has been bettered only in details by his successors.

The work of Norris drew Westergaard[2] once more into the arena with criticism, with fresh conjectures, and with several marked improvements. Mordtmann[3] followed him in a paper too little leaning upon the work of predecessors, and therefore containing useless combinations and repetitions, but, nevertheless, making a few gains upon the problems. He named the lan-

[1] *Journal of the Royal Asiatic Society*, xv, p. 5.

[2] Westergaard, Om den anden eller den sakiske Art af Akhaemenidernes Kileskrift, in "*Det kongelike Danske Vedenskabernes Selskabs Skrifter.*" Femte Raekke; Historisk og philosophisk Afdeling; Andet Binds, forste Hefte, pp. 39–178. Kjöbenhavn, 1856.

[3] "Erklärung der Keilinschriften zweiter Gattung," von A. D. Mordtmann, *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xv, pp. 1–126. "Ueber die Keilinschriften zweiter Gattung," *ibid.*, xxiv, pp. 1–84.

Shudurkib (15)	(Ug-me)	
	Ur-Bau	
12 kings reigned 197 years	Nammakhni	
	Ur-gar	
Dynasty of Uruk (Erech):	(Ka-azag)	
Ur-nigin (3)	(Galu-Bau)	
Ur-ginar (6)	(Galu-Gula)	
Kudda (6)	(Ur-ninsun)	
Bashaili (5)		
Ur-utu (Shamash) (6)		
5 kings reigned 26 years		
Dynasty of Gutium:		
Imbi [-]	Gudea	
Inki [-]		
Dada [-]		
Irridupizir		
Lasirab		
Sium		
Shamash-bani[4]		*Dynasty of Erech:*
Tirigan[4]		Utu-khegal
11 kings, 125 years		
Dynasty of Ur:		
Ur-Engur (18) 2477–2459	Ur-Ningirsu Ur-Abba	
Dungi (58) 2459–2401	Galu-kazal Galu-andul Ur-lama I	Ur-neshu, *patesi* of Umma
	Alla Ur-lama II	
Bur-Sin I (9) 2401–2392	[. . . .]-kam	
Gimil-Sin (9) 2392–2383		
Ibi-Sin (25) 2383–2358	Arad-Nannar	
5 kings reigned 117 years		

Dynasty of Isin: (*Nisin*)		*Dynasty of Larsa:*
Ishbi-ura (32) 2358–2326		Naplanum (21) 2364–2343
Gimil-ilum (10) 2326–2316		Emisu (28) 2343–2315
Idin-Dagon (21) 2316–2295		Samum (35) 2315–2280
Ishme-Dagan (20) 2295–2275		Zabaia (9) 2280–2271
Libit-Ishtar (11) 2275–2264		Gungunu (27) 2271–2244
Ur-Ninib (28) 2264–2236	THE KINGDOM OF BABYLON	Abisare (11) 2244–2233
Bur-Sin II (21) 2236–2215	FIRST DYNASTY[5]	
Iter-pisha (5) 2215–2210	Sumu-abu (14) 2232–2218 B. C.	Samu-ilu (29) 2233–2204
Ura-imitti (7) 2210–2203		Kur-Immer (167) 2204–2188
Sin-? (3½) 2203–2203	Sumu-la-ilu (36) 2218–2182	
Ellil-bani (24) 2203–2179		Sin-idinnam (7) 2188–2181
Zambia (3) 2179–2176	Zabum (14) 2182–2168	Sin-iribam (2) 2181–2179
[. . . . .] (5) 2176–2171		
Ea[. . . . .] (4) 2171–2167	Apil-Sin (18) 2168–2150	Sin-ikisham (67) 2179–2173
Sin-magir (11) 2167–2156		Silli Immer (1) 2173–2172
Damik-ilishu (23) 2156–2133	Sin-muballit (20) 2150–2130	Warad-Sin (12) 2172–2160
	Hammurapi (43) 2130–2087	Rim-Sin (61?) 2160–2099
16 kings reigned 225½ years	Samsu-iluna (38) 2087–2049	
	Abeshu (Ebishum) (28) 2049–2021	[The list of these names comes from Sumerian King List III. See above, p. 474.]
	Ammiditana (37) 2021–1984	
	Ammisaduka (21) 1984–1963	
	Samsuditana (31) 1963–1932	

[1] The names and the order are according to Arno Poebel, *Historical Texts* (Philadelphia, 1914).

[2] Poebel makes the name Irimush, and places him before Manishtusu.

[3] The list of names of the First Dynasty of Babylon comes to us in the first instance from the Babylonian King Lists A and B. (See above, p. 470.) Some of the years of reign come from the same source, while others are corrected by the Date Lists. (See above, p. 479.) Some interesting and important synchronisms have been found for these kings. The first of these is that Sumu-abu is contemporaneous with Ilu-shuma of Assyria. (Chronicle concerning Sargon and Naram-Sin, etc. Reverse line 14, King, *Chronicles*, etc., II, p. 14. Compare above, p. 483.)

Samsu-iluna and Abeshu are contemporaneous with Iluma-ilu the first king of the so-called Second Dynasty of Babylon, or the dynasty of the Sea-Land. (Chronicle concerning early Babylonian rulers. Reverse, lines 5–8, King, *Chronicles*, etc., II. pp. 20, 21. Compare above, p. 484.) This synchronism gives us the date of the beginning of the Second Dynasty.

According to Nabonidus, Hammurapi reigned 700 years before Burnaburiash. This would date Hammurapi about 2075 B. C. (see above, p. 492), which is surely in very close correspondence with the date as given here.

[4] This name first discovered by Clay. (Private communication.)

[5] So Poebel, *op. cit.*

[6] So Poebel.

L. Oppert.

Jules Oppert

Born at Hamburg, Germany, of Jewish parentage, July 9, 1825; studied at Heidelberg, Bonn, and Berlin, and then went to France where he was for a time teacher of German in the Lycée, at Reims. Distinguished as a decipherer he devoted a long life to Assyrian studies, filling the chair of Assyrian philology and archæology in the Collège de France. He was brilliant, gay in conversation, and profound in learning, and died August 21, 1905, leaving a splendid record as a scholar.

guage Susian—and the name was happily chosen, and is still used more than any other, but in 1897 Hüsing[1] proposed the name Elamite, which has rapidly gained in favor, as more perfectly comprehending the wide extent of territory covered by this language. A. H. Sayce[2] attacked the problem next in two brilliant papers, the first of which even went so far as to present a transcription and partial translation of two small inscriptions. The translation was necessarily fragmentary, but none of the former workers had equaled it. He argued learnedly for the name Amardian for the language, and returned again to this matter in a second paper, which likewise registered progress in the decipherment. In this latter paper he used for the first time the name Elamite for the character, though not adopting it conclusively as the name of the language. Oppert,[3] who gave most of his great skill to other questions, also studied these texts shortly after Sayce, and made contributions of importance to the problem. His success was due, in large measure, to his method of comparison between these Susian or Elamite signs on the one hand with the Assyrian-Babylonian

[1] G. Hüsing, *Die iranischen Eigennamen*, p. 3. Norden, 1897.

[2] "The Languages of the Cuneiform Inscriptions of Elam and Media," by A. H. Sayce, *Transactions of the Society of Biblical Archæology*, iii, pp. 465–485. "The Inscriptions of Mal-Amir and the Language of the Second Column of the Akhæmenian Inscriptions," by A. H. Sayce, *Actes du VIième Congrès International des Orientalistes, tenu en* 1883 *à Leide*, 2ième partie, section 1: Semitique, pp. 637–756.

[3] See especially Jules Oppert, *Le Peuple et la Langue des Mèdes*. Paris, 1879.

signs on the other, for the latter, as we shall see later, were already yielding their secrets to students. Oppert urged that two characters never express the same sound,[1] and so cleared the path of some misconceptions. He also admitted that we should expect an independent sign to express the vowels a, i, u before and after each consonant, and so separate signs for *ab*, *ib*, *ub*, and *ba*, *bi*, *bu* should be found. The principle was useful, though experience has shown that the language did not consistently carry it out to a logical conclusion, else we should have far more signs than those actually existing. Oppert's syllabary contained eighty-three signs correctly identified, and seven that were quite wrong. He named the language Medo-Scythic and argued that it was grammatically related to Magyar, Turkish, Mongol and Finnish, and that it had been spoken in the neighborhood of Persepolis and Behistun, going far astray in this supposition. The problem of the second form of writing at Persepolis and at Behistun was solved, and in 1890 Weissbach[2] was able to gather up all the loose threads and present clear and convincing translations of the long-puzzling inscriptions.

If now we pause for a moment and look back,

[1] "Deux caractères n'expriment jamais le même son." *Expédition*, etc., ii, p. 35, quoted by Booth, *Discovery and Decipherment*, p. 320.

[2] F. H. Weissbach, *Die Achämendeninschriften Zweiter Art*. Leipzig, 1890. See further F. H. Weissbach, *Die Keilinschriften der Achämeniden*. Leipzig, 1911.

we cannot fail to be moved by the patience, skill, and learning that had been employed in the unraveling of these tangled threads of ancient writing. It was a long and a hard hill, and many a weary traveler had toiled up its slope. Persian and Susian at last were read. The progress, slow at first, had at last become very rapid. As yet, however, the historical results had been comparatively meager. The inscriptions were not numerous, and their words were few. But how different this would be if only the third language could be deciphered. That third language at Persepolis and at Behistun was undoubtedly Assyrian or Babylonian. Here in Susian and in Persian were the clues for its deciphering. If it could be read, men would have before them all the literatures of Assyria and Babylonia. What that meant was even now daily becoming more clear. While Norris was working quietly in England, Botta and Layard were unearthing inscriptions by the score in Assyria, and the first fruits of Babylonian discovery were likewise finding their way to Europe. With such a treasure-trove it was not surprising that men almost jostled each other in their passionate eagerness to learn the meanings of the strange complicated signs which stood third at Persepolis and at Behistun.

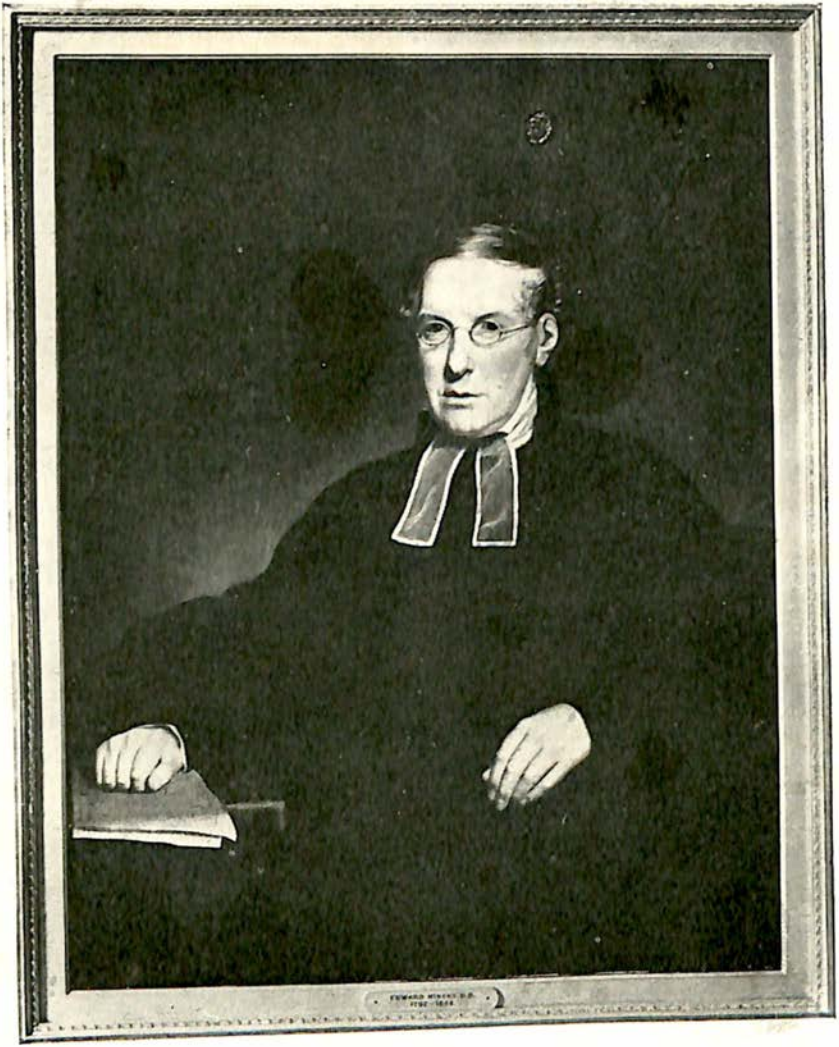
Grotefend had picked out among the Assyrian transcripts of the Persepolis inscriptions the names of the kings, just as he had in the old

Persian texts, but was able to go but little further. More material was imperatively necessary before much progress could possible be made. As soon as the letters from Botta to Mohl were published announcing the discoveries at Khorsabad a man was found who plunged boldly into the attempt at deciphering Assyrian. Isidore de Loewenstein made his chief point of departure in a comparison of the Assyrian and Egyptian inscriptions on the Caylus vase.[1] It was hardly a good place to begin, and it is therefore surprising that his success was so great as it really was. Loewenstein made the exceedingly happy stroke of suggesting that the Assyrian language belonged to the Semitic family of speech, and was therefore sister to Hebrew, Arabic, and Aramæan.[2] This suggestion would alone dignify his work, for it became exceedingly fruitful in the hands of later workers. He was, however, not very successful in determining the values of the signs, and in that there was the greatest need for success. He had, however, given correct meanings to the signs for "*king*," "*great*," and to the sign for the *plural*. In the second memoir[3] Loewenstein was much more successful, for his point of departure was more happily chosen. He

[1] *Essai de déchiffrement de l'Ecriture Assyrienne pour servir a l'explication du Monument de Khorsabad*, par Isidore Löwenstein. Paris and Leipzig, 1845.

[2] *Ibid.*, pp. 12, 13.

[3] *Exposé des élements constitutifs du systéme de la troisiéme écriture cunéiforme de Persépolis*, par Isidore Löwenstein. Paris and Leipzig, 1847.



Portrait of the Reverend Edward Hincks.

[Photographed from the original oil painting in the library of Trinity College, Dublin, by permission of the Provost, the Reverend Dr. John Pentland Mahaffy.]

now chose for comparison the proper names of Persians,[1] which were transliterated in the Assyrian texts. With such comparisons a beginning might well be made, and this beginning Loewenstein made in happy fashion. To him, however, it was not given to read an Assyrian text; that proved to be a task much more difficult than anyone had imagined.

But workers were increasing in numbers, and all had hope that at last the way out to the light must be found.

Of all these none was gifted with such marvelous skill in decipherment as Edward Hincks. He had already had a goodly share in the decipherment of the first form of the Persepolis inscriptions, and, as we have just seen, his work upon the second was exceedingly important. Both these services he was now to surpass, and apparently with ease. Upon November 30, and again upon December 14, 1846, he read before the Royal Irish Academy two papers, afterward printed as one,[2] in which he plunged boldly into the decipherment of the Babylonian. In a third paper, read on January 11, 1847,[3] he modified somewhat the views expressed in the two former papers, and advanced a step farther. In the

[1] *Ibid.*, p. 10, footnote 1, where a complete list of the names used is given.

[2] On the three kinds of Persepolitan writing, and on the Babylonian lapidary characters. *Transactions of the Royal Irish Academy*, xxi, "Polite Literature," pp. 233, ff.

[3] On the third Persepolitan writing, and on the mode of expressing numerals in cuneatic characters, *ibid.*, pp. 249, ff.

preparation of these papers it seems quite clear that Hincks had received no help from any other worker. Loewenstein's first paper he had not seen, and the second paper was not yet published. The work of Hincks was independent in every way. What he accomplished in those three papers it would be difficult to exaggerate. A number of Babylonian signs were definitely determined in meaning, and the meanings then assigned remain the standard to this day. He even succeeded at this time in determining correctly a large part of the numerals.

His progress was chiefly the result of comparisons of proper names in the Persian texts, which were now well known, with those in the Babylonian, though he says himself "even more were determined by comparing different modes of writing the same word." He secured correctly the three principal vowels, *a*, *i*, and *u*, and even identified a second sign for *u*. He spelled out the personal pronoun "I" quite correctly as *a-na-ku*, and identified the ideograms for earth or land, son, great, man, house, and god and the plural sign. So far had he come in December, 1846. In the next month (January, 1847) he advanced even upon this high water mark, for he essays the beginnings of a study of Assyrian phonology, assimilating the sounds to the letters of the Hebrew alphabet, and dividing the signs into classes as labials, gutturals, dentals, and the like. Not all of these classifications can now be con-

sidered correct, but the boldness of the effort and the substantial correctness of the results are alike remarkable. He had indeed laid the foundations for the successful decipherment of Babylonian, and upon these foundations, even as he laid them, the present superstructure stands. In 1848 Mohl reported to continental students the work of the gifted Irishman, and thus helped to prevent a useless duplication. He was on the clear high road to a reading of the texts, but he was too careful to venture to translate. His method, even under the pressure of the enthusiasm that must have tingled in his veins, remained rigidly scientific.

And now the inscriptions which Botta had unearthed at Khorsabad began to come to Paris. From the heavy wooden cases came slabs of stone, covered with dust, but bearing strange wedge-shaped characters. Henri Adrien de Longperier was now to arrange them in the same order in the Museum of the Louvre. He could not do this work without a longing to read these unknown characters, and so, like others elsewhere, he began to ponder over the hard problem. He was familiar with Loewenstein's work, and so began his own efforts standing upon Loewenstein's shoulders. It is true that Loewenstein could not give him much help with individual signs, but he had at least selected a group of signs, after comparison with old Persian, which he believed represented the word

"great," and was probably to be pronounced *rabou*. Loewenstein had learned this from the Persepolis inscriptions. Longperier found the same group in the inscriptions from Khorsabad. He assumed its correctness and pushed on a bit further. In these texts of Botta a little inscription was often repeated, and after long comparison A. de Longperier translated the whole inscription in this way:

"Glorious is Sargon, the great king, the [. . .] king, king of kings, king of the land of Assyria."[1] But the strange thing about this translation was this, that he could not name or pronounce a single word in it all except the one word, *rabou*, "great." Yet the researches that were to follow showed that the translation was almost a full and correct representation of the original. If de Longperier had had before him the list of signs and meanings which Hincks had already proposed, he might have gone further. As it was, he made out the name of Sargon, and there paused. Even this correct identification waited several years for its adoption, for Hincks in 1847 had read the name Ni-Shar, and in 1849 Kin-nil-li-n'a, and Rawlinson made it Arko-tsin, and not until 1851 does he accept Sargina.[2] When one looks back upon all this work in France, England, and Ireland, and sees the little

[1] *Journal Asiatique*, x, pp. 532, ff. Comp. also *Revue Archéologique*, 1847, pp. 501, ff., "Lettre à M. Isidore Löwenstein sur les inscriptions cunéiformes de l'Assyrie" (20 Septembre, 1847).

[2] So Booth, *Discovery and Decipherment*, p. 369.

gain here and another there, he cannot but think that the slow progress was chiefly due to lack of communication. If, by some means, each worker might have known at once the move of his friendly rival, the progress must inevitably have been more rapid. It is indeed true that the men who worked in France managed through published paper or letter or society meeting to keep fairly well in touch. But the much more brilliant Irishman beyond two stormy channels found no way of learning promptly what they were thinking, and, still worse, was not readily able to make known his work to them. So much was this latter fact painfully true that the keen Frenchmen worked steadily on without his invaluable aid. This lack of ready communication of hypotheses and of results still continues in a measure, in spite of all improvements in printing and in dissemination of documents, and appears to be increased rather than diminished by the vast number of societies and of journals devoted to the pursuit of science.

Botta was now back again in Paris and was publishing in parts a memoir[1] upon the language of the inscriptions which he had brought back to the world. He made but little effort to decipher

[1] This memoir of Botta began in the *Journal Asiatique*, Mai, 1847, and continued until Mars, 1848. It was published entire under the title *Mémoire sur l'écriture cunéiforme Assyrienne*, par M. Botta, Consul de France à Mossul. Paris, 1848. For a rather more detailed account of Botta's method in this investigation see Hommel, *Geschichte*, pp. 94, 95, and Kaulen, *Assyrien und Babylonien*, 5te Aufl., pp. 137, 138.

or to translate, but he collated all the inscriptions which he had found, and made elaborate lists of the signs which he found upon them. He differentiated no less than 642 separate signs—enough to make the stoutest heart of the decipherers quail. For every one of these signs a value, or a meaning, or both, must be found. This at once and forever settled all dispute about an alphabet. If there were 642 characters, some of them certainly must represent syllables. But how could there possibly be so many syllables? Botta looked over the Persepolis inscriptions comparing inscription No. 1, that is Persian, with inscription No. 3, that is Babylonian. In No. 1 he sometimes found the name of a country represented by *several signs*, whereas in No. 3, in the proper place, he found the same country represented by only *one* sign. It now became clear that this Babylonian language was partly at least written in ideograms. Here was another added difficulty, for even if one should learn the meaning of these ideograms, how would it ever be possible to learn the word itself, or, to speak loosely for the moment, its pronunciation? That was a problem, surely, and the means for its solution did not appear at that time, nor for many days. Botta's work went on, however, without this most desirable knowledge, and he finally picked out the words for king, land, people, and a few others of less importance, but still could not spell the words out in Roman characters.

He could set down a sign and say, "There, that means *'land,'* but I absolutely do not know how the Assyrians read it." With knowledge so defective, Botta naturally did not attempt any complete translations. He had, however, made a useful contribution in positive directions, and a still more useful one negatively by showing how untenable were some of the old alphabetic theories.

Meantime de Saulcy went on with his struggles over the Persepolis and other inscriptions of the Achæmenian kings. He published some papers which unhappily reached no successful result. This has brought him somewhat under the ban of the unthinking, who themselves never dare make a mistake, and hence never accomplish anything. De Saulcy made the mistakes, soon perceived them, and went on cheerfully to repair them. He had also been working at Egyptian, and had learned much in that school of the processes of decipherment. In this he was like Hincks, and de Longperier seems also to have gained useful hints in the same school. Now de Saulcy was ready to take the daring step of attempting to decipher and translate an entire inscription. This was the first publication of an entire Assyrian inscription, with a commentary justifying and explaining the method word by word. In this paper de Saulcy set down one hundred and twenty signs the meaning of which he thought he knew, but the uncertainty was great, and even he could hardly

claim that he had resolved fairly the difficulties which hung around the repetition of signs for the same consonant.

What de Saulcy could not accomplish was achieved by Hincks. In a remarkable paper on the Khorsabad inscriptions, read June 25, 1849,[1] Hincks showed how vowels were expressed along with their consonants in the same sign. There was, for example, a sign for RA, and another for RI, and still another for RU. Then there was a sign for AR, and presumably also for UR and IR, though he did not fully and perfectly define the last two. Here was an enormous gain, for to all these separate signs de Saulcy had assigned the meaning R.

But his chief object in this paper was the study of the ideographic values. He determined that certain signs had an ideographic value *only*; as, for example, the sign , bab, which signifies gate, though later study was to show that it really does possess the syllabic value ká. A much greater expression of his ingenuity is found in the following sentences: "Some characters not only represent words by themselves, but in composition with other characters represent other words; the composition representing the ideas and not the sounds. Thus , the first word in most of the Assyrian

[1] *Transactions of the Royal Irish Academy*, vol. xxii, "Polite Literature," pp. 1, ff.

inscriptions, is compounded of two, which signify 'house, great,' and which were read, when separate, *bit, rab;* but there is no reason to suppose that the word made up of these two characters was read *bitrab.* It is probable that it had a sound of its own totally distinct. The meaning was, however, compounded of the meaning of these two. It was 'a palace,' or 'public building.' "[1] All this is absolutely correct, and, as we know, the word is pronounced *ekallu.* It is difficult to overestimate the genius of the man who so early saw his way through these ideographic mazes. This paper was not fully completed until January 19, 1850, up to which time Hincks continued to make corrections or additions. At its very end he added a few lines of translation from Assyrian. This was indeed a translation in a sense attained by no other interpreter. It gave first the Assyrian characters, then an attempted transcription into Roman characters, and finally the almost complete and very nearly correct translation. It is impossible to read this paper at this date without astonishment at its grasp of fundamental principles, its keen insight into linguistic form and life, and its amazing display of powers of combination.

The year 1849 had ended well, and the year 1850 had begun with every sign of hope. Now

[1] *Transactions of the Royal Irish Academy,* vol. xxii, "Polite Literature," pp. 24, 25.

were even greater things in store. Layard's discoveries at Nineveh had begun to reach London, where they could not fail to rouse afresh Assyrian study, just as Botta's had done in France. It was natural that the first man to avail himself of the fresh material thus made accessible should be Sir Henry Rawlinson. No man had suffered so much in his efforts to secure copies of inscriptions, and now that he was again in London it is not surprising that he should at once seize upon the beautiful obelisk which Layard had brought from the mound of Nimroud. In two papers read January 19 and February 16[1] Rawlinson gave an elaborate and an acute handling of this great inscription, concluding with a tentative translation of those parts of it which appeared to his study to give a reasonable sense. If we compare this work of Rawlinson with the work of Hincks, it suffers considerably by the comparison. Rawlinson, it is true, has often hit the true sense of a passage; more often he has even presented a smooth translation which late study has gone far to justify. On the other hand, he did not give text, transcription, *and* translation together, as Hincks had done, and it was therefore impossible for students who could not examine the original to criticise, verify, or disprove the values he assigned to the characters. It is clear that without this there can never be definite, determined progress in any

[1] *Journal of the Royal Asiatic Society*, xii, pp. 401, ff.

work of interpretation. Nevertheless, though the means for this had not been given by Rawlinson in his translation, he had discussed a number of words, printing the sign with its transcription and translation, and thereby supplying full material for the use of later workers.

But even after this Rawlinson's great contribution to the decipherment was still to be given. While scholars in Europe had been struggling over the Persepolis inscriptions he was living alone in Baghdad, seeking every opportunity to study the rocks at Behistun, and so obtain a complete copy of the great trilingual inscription of Darius. He had already published the Persian part of this text; and Edwin Norris, with his permission, had issued the second (then called Median) part. The most important part was the Babylonian, and the copy of this Rawlinson still held in his own possession, laboriously working it over, and trying to wring the last secret from the complex signs before he ventured upon its issue to the world. For the length of this delay Rawlinson has been most unjustly blamed and criticised.[1] That he was jealous of his fame is made clear enough by the controversial letters of later years, but in this he was well enough justified. Others were at work in the effort to decipher these long-lost records of

[1] See the allusions made to the subject by F. Max Müller in his *Biographical Essays*, pp. 284, 287, and elsewhere. These and other allusions in the same paper which seemed to reflect upon Rawlinson led to an animated controversy in the *Athenæum* in 1884.

old world peoples. They were eager for the phantom of fame for themselves, and few would be likely to take pains to conserve to Rawlinson the fame which was justly due his achievements, as some little compensation for the loss of ease and for the privations and toils which he had endured.

At last, in 1851, appeared the long-expected, eagerly awaited *Memoir*.[1] Rawlinson published one hundred and twelve lines of inscription in cuneiform type, accompanied with an interlinear transcription into Roman characters and a translation into Latin. To this was added a body of notes in which many principles of grammar and of interpretation were discussed, together with brief lists of signs.

This *Memoir* of Rawlinson is justly to be considered an epoch-making production. Here at last was a long and difficult inscription almost completely translated; and here was the subject of the Assyrian language carried even to the point of close disputing about grammatical niceties. It was indeed the completion of a gigantic task pursued amid great difficulties, with a single eye. Science and society have too little honored the man who dared and executed this great task.

But great as was the result of Rawlinson's work, there was a sense in which it brought new difficulties and trials to the patient interpreters of the texts. It became perfectly clear from his

[1] *Journal of the Royal Asiatic Society*, vol. xiv, entire (1851).

studies that in Assyrian or Babylonian the same sign did not always possess the same meaning. Such signs as these Rawlinson called polyphones. This was added difficulty upon difficulty. Here, for example, was a sign which had the syllabic values *Kal, Rib, Dan,* etc. This principle seemed to some of Rawlinson's critics perfectly absurd. In the popular mind, also, it did very much to destroy all faith in the proposed interpretation of the Babylonian inscriptions. "How," one man would say, "do you know when this sign is to be read *Kal,* or when *Rib,* or how do you know that it does not mean *Dan?*" "Yes," adds another, "how do you expect us to believe that a great people like the Assyrians and Babylonians ever could have kept record with such a language, or with such a system of writing as that? The whole thing is impossible on the face of it." Of course, such criticism could make no impression upon Rawlinson himself; his knowledge had come to him by painful steps and slow, and was not thus easy to overthrow. It did, however, have weight in popular estimation, and the popular estimate cannot be despised or cast aside even by scholars. It had to be reckoned with, as Rawlinson knew well enough. It would be easy after a while to prove that his interpretation was correct—for that day he could wait patiently. It was, however, unfortunate that Rawlinson could not have set forth all his reasons and all his processes,

together with all the critical apparatus. In this particular one must feel some disappointment over the great *Memoir*—in this at least it was not equal to the papers of Hincks. He had, however, made out one hundred and fifty signs. There are in common use nearly two hundred more.

While Rawlinson was now thought by many to have solved the problem in the main points, Hincks never relaxed for a moment his energetic pursuit of interpretation.

In July and August, 1850, he appears to have attended the meeting of the British Association at Edinburgh, where he circulated among the members a lithographed plate containing a number of signs registering forms of verbs. This paper, of which only a brief sketch was published,[1] has been almost overlooked in the history of the progress in Assyrian research. It is, however, of great importance. It shows that Hincks had gone beyond the point of mere guessing at the meanings of sentences, and had reached the point of studying the grammar of the language which was in his hands. In this field he was soon to excel all others, and lay deep and solid foundations of Assyrian grammar.

During the year 1851 Hincks appears to have published nothing, and was then probably en-

[1] *Report of the Twentieth Meeting of the British Association for the Advancement of Science*, held at Edinburgh in July and August, 1850. London, 1851, p. 140, with plate at the end.

gaged in a study of all the material that was accessible. In the next year he published a list of two hundred and fifty-two Assyrian characters, the rules of which he discussed separately.[1] This paper marks an extraordinary advance over all that had gone before. He now applies no longer the old method of decipherment alone, but adds to this method a new and far more delicate one. He analyzes grammatical forms, and shows how a root appears in different forms according to its use in different conjugations. By this means he is able to test the values proposed and to verify them. In this paper, also, he showed that Assyrian possessed a most elaborate system of writing. There were first signs for single vowels, such as a, i, u. Secondly, there were simple syllabic characters, such as ab, ib, ub, ba, bi, bu; thirdly, there were complex syllabic characters, such as bar, ban, rab, etc. Of these two hundred and fifty-two characters, one hundred and eighteen were now published for the first time, and even though some of these were incorrect, they still represent an amazingly long stride beyond Rawlinson in a very brief space of time. With Rawlinson, however, there still remained an unassailable superiority in translating. He seemed to possess a power of divining the general drift of meaning, even when

[1] *On the Assyrio-Babylonian Phonetic Characters*, by the Rev. Edward Hincks, D.D. *Transactions of the Royal Irish Academy*, vol. xxii, part ii, "Polite Literature," pp. 293, ff.

grammatical analysis failed him, and in this field Hincks made no effort to compete with him.[1] To each man his own gifts and his own reward.

Meantime Jules Oppert had returned from Babylonia and soon after visited England to see the British Museum collections. He was present at the meeting of the British Association at Glasgow in 1855, and there heard Sir Henry Rawlinson's account of the excavations at Birs Nimroud, and himself spoke upon the results of his own work in Babylonia.[2]

The workers were now increasing in numbers, for Oppert was a great accession in Paris, after his two years of absence, and in England there was a new accession in the person of Fox Talbot, a remarkably gifted man. But with all the new workers in Ireland, France, and England, who gave in their adhesion to the principles and the results of decipherment, there were many who

[1] I have had the pleasure of examining in the library of Trinity College, Dublin, in the month of June, 1914, the copies of Rawlinson's Inscriptions of Western Asia which belonged to Hincks. They are an astonishing revelation of his skill as a *translator*. Whether from diffidence, excessive caution or some other potent cause he published but a small portion of his translations. The volumes are extensively interlined with translations remarkable for a combination of grammatical analysis with a grasp of the general idea. Had he published even a small portion of these, the judgment which I have expressed in the text would have been reversed. The judgment must remain as it is, for the historian of the science must base his decision on the published work of the pioneers and not upon that which they left hidden in their notes. It is nevertheless proper to add this statement as a footnote to the story.

[2] *Report of the Twenty-fifth Meeting of the British Association for the Advancement of Science*, held at Glasgow in September, 1855. London, 1856, pp. lxxii, 148, 149.

derided or who doubted the whole matter. Often before had doubts been expressed about the translations, and the investigators passed quietly on and paid no attention. H. Fox Talbot was, however, in the fresh enthusiasm of his scholastic life, unwilling longer to hear these doubts without some effort to dissipate them. He therefore devised a novel and striking plan. Rawlinson was now about to publish for the trustees of the British Museum lithographic copies of selected Assyrian inscriptions. He had already copied and had lithographed the contents of a cylinder, which he asserted contained the name Tiglathpileser. An advance copy of this lithograph was sent to Fox Talbot, who at once made a translation of the parts which he could readily make out. This translation he put in a packet, carefully sealed; and sent to the Royal Asiatic Society, accompanied by a letter the purpose of which appears clearly in the following extracts:

"Having been favored with an early copy of the lithograph of this inscription by the liberality of the trustees of the British Museum and of Sir H. Rawlinson, I have made from it the translation which I now offer to the society. A few words will explain my object in doing so:

"Many persons have hitherto refused to believe in the truth of the system by which Dr. Hincks and Sir H. Rawlinson have interpreted the Assyrian writings, because it contains many

things entirely contrary to their preconceived opinions. For example, each cuneiform group represents a syllable, but not always the same syllable; sometimes one and sometimes another. To which it is replied that such a license would open the door to all manner of uncertainty; that the ancient Assyrians themselves, the natives of the country, could never have read such a kind of writing, and that, therefore, the system cannot be true, and the interpretations based upon it must be fallacious."[1]

This was the situation as Talbot apprehended it, and he suggested that his translation be kept sealed until Sir Henry Rawlinson's should be published, and then that the two versions be compared. If then the two were found in substantial agreement, it would go far to convince the doubting, as each translation would have been made entirely independently of the other. When this communication was read before the Society Sir Henry Rawlinson moved that measures be taken to carry out Mr. Talbot's plan upon even a greater scale than he had purposed. It was determined to request Sir Henry Rawlinson, Edward Hincks, and Jules Oppert to send to the Society, under sealed covers, translations of this same inscription. These translations were then to be opened and compared in the presence of the following committee: The Very Rev. the Dean of St. Paul's (Dr. Milman), Dr. Whewell,

[1] *Journal of the Royal Asiatic Society*, xviii, p. 150.

Sir Gardner Wilkinson, Mr. Grote, the Rev. W. Cureton, and Prof. H. H. Wilson.

Sir Henry Rawlinson furnished an almost complete version, but neither Dr. Hincks nor Dr. Oppert had had time to complete theirs. They sent in, however, enough for effective comparison. The versions were found indeed to be in closest correspondence, and the committee reported that:

"The coincidences between the translations, both as to the general sense and verbal rendering, were very remarkable. In most parts there was a strong correspondence in the meaning assigned, and occasionally a curious identity of expression as to particular words. Where the versions differed very materially each translator had in many cases marked the passage as one of doubtful or unascertained signification. In the interpretation of numbers there was throughout a singular correspondence."

The examiners then drew up tables of coincidences and of variations, and the Royal Asiatic Society published all four translations side by side.

The effect in Great Britain of this demonstration was great and widespread. It gradually became clear to the popular mind that the Assyrian inscriptions had really been read, and the popular mind in Great Britain is a force in science as in politics. The results of its influence would soon appear.

In France the tide turned more slowly, but none the less surely. On July 15, 1863, Oppert received from the French Academy the great quinquennial prize of twenty thousand francs "to that work or that discovery judged most suited to honor or serve the country." After that judgment the scoffer was silenced.

With these popular demonstrations the task of interpreting the Assyrian and Babylonian inscriptions may properly be regarded as having reached an assured position. It was indeed necessary that all the work from the very beginning of Grotefend's first attempts at decipherment of the Persepolis inscriptions should be tested by fresh minds. This testing it secured as man after man came to the fore as a student of Assyriology. The ground was, however, fully gained and completely held. Assyrian study was able to take its place by the side of older sisters in the universities of the world. The material which Botta had sent to Paris was being quickly read, and papers dealing with its historic results were appearing almost weekly. In England the inscriptions which had been sent home from the excavations of Layard, Loftus, Taylor, and especially Rassam, were yielding up their secrets. It could not be long until popular opinion would demand that the excavations be resumed. At this time, however, workers were busy securing the results of previous expeditions.

In the midst of all these efforts at decipher-

ment there began a movement destined to influence greatly the progress of Assyrian studies in England. On the 18th of November, 1870, there met in the rooms of Mr. Joseph Bonomi, Lincoln's Inn Fields, a company of men summoned by him and by Dr. Samuel Birch, of the British Museum. They were bidden "to take into consideration the present state of archæological research, and, if it appeared desirable, to institute an association for directing the course of future investigations, and to preserve a record of materials already obtained, an association whose special objects should be to collect from the fast-perishing monuments of the Semitic and cognate races illustrations of their history and peculiarities; to investigate and systematize the antiquities of the ancient and mighty empires and primeval peoples, whose records are centered around the venerable pages of the Bible." As the result of this preliminary conference a public meeting was convened at the rooms of the Royal Society of Literature on the 9th of December, 1870, at which time the Society of Biblical Archæology was formed. Dr. Samuel Birch was chosen president, and Mr. W. R. Cooper secretary, while Sir Henry Rawlinson, the Right Hon. W. E. Gladstone, and Dean R. Payne Smith were vice-presidents. Among the earliest list of members were found Edwin Norris, Hormuzd Rassam, W. H. Fox Talbot, Rev. A. H. Sayce, and George Smith. The society was suc-

cessful from the very beginning of its existence, its influence upon Assyrian and Babylonian study being particularly noticeable. The first volume of *Transactions* was issued in December, 1871, and in it Fox Talbot wrote on "An Ancient Eclipse" (in Assyria), and George Smith contributed an elaborate paper on "The Early History of Babylonia." In a short time the society's publications became the chief depository of investigations made by English scholars in the books of the Assyrians and Babylonians.

CHAPTER VII

THE DECIPHERMENT OF SUMERIAN[1] AND OF VANNIC

THE first students who attempted to decipher the ancient Persian inscriptions made much of the difficulty of the cuneiform characters. They were so totally unlike any other form of writing that even while men were busy in the effort to find out their meaning disputes began as to their origin. If the signs had looked like rude pictures of objects, as did Egyptian hieroglyphics, there would have been some clue to their origin, but during the decipherment process no one could discern any such resemblance. When the decipherment of Assyrian began men wondered still more as to the inventors or discoverers of the strangely complicated signs. When Assy-

[1] The history of the Sumerian discoveries and disputes has been written by Weissbach (*Die Sumerische Frage*, von F. H. Weissbach, Leipzig, 1898) in so masterly fashion that all who now study this interesting and important episode in cuneiform research can hope for nothing more than the position of gleaners, and may be pardoned if they sometimes doubt whether even a single full head of grain remains. It were pedantic to attempt to do the work all over again without drawing upon his unrivaled collection of materials, and this chapter therefore depends very much upon him, and hearty acknowledgment is here made of the fact. It attempts to seize upon the salient points and emphasize them, but students who wish to follow the minute discussions, unsuitable for a book of this character, must have recourse to Weissbach.

rian was finally read it became clear to several investigators almost simultaneously that it belonged to the Semitic family of languages. That discovery intensified the difficulty concerning its method of writing. In 1850 Edward Hincks called attention[1] to the fact that, though Assyrian was a Semitic tongue, yet was its script totally unlike that used by any of the related languages. He suggested that the script was related to the Egyptian, and put forth the hypothesis that it was invented by an Indo-European people, who had been in contact with Egyptians and had borrowed something from their method of writing.

Shortly afterward (1853) Rawlinson wrote to the Royal Asiatic Society[2] announcing the discovery of a number of inscriptions "in the Scythian language," which he thought were related to the Median texts of the Persepolis inscriptions. He pronounced these new inscriptions to be older than the Persepolis inscriptions, and also older than the dynasty of Nebuchadrezzar, and argued that the Scythians were in possession of the western country before the Semites appeared. He was clearly of the opinion that he had found inscriptions written in cuneiform characters, but in a non-Semitic language.

[1] *Report of the Twentieth Meeting of the British Association for the Advancement of Science*, 1850. *Transactions of the Sections*, p. 140. See also *Transactions of the Royal Irish Academy*, vol. xxii, "Polite Literature," p. 295 (dated November 24, 1852).

[2] *Athenæum*, 1853, p. 228.

He seems, in a word, to be moving toward the idea that these Scythians had invented the cuneiform method of writing. This view was propounded in the very next year by Oppert,[1] who attempted to show how this assumed Scythian script had passed over into the hands of the Assyrians.

Rawlinson was now busily engaged in the investigation of the new problem, and on December 1, 1855, was able to report substantial progress to the Royal Asiatic Society.[2] He had been studying so-called "Scythian" inscriptions as old as the thirteenth century B. C., and he found the same language in the left columns of the Assyrian syllabaries. These syllabaries he explained as consisting of comparative alphabets, grammars, and vocabularies of the Scythian and Assyrian languages. His theory now was that these Babylonian Scythians were known as Accadians. They were the people who had built the cities and founded the civilization of Babylonia. The Semites had merely entered into their labors, and had adopted from them the cuneiforn system of writing. The language of the Accadians he thought more closely related to the Mongolian and Manchu type than to any others of the Turanian languages.

Hincks had meantime been studying some small bilingual texts and was prepared to state

[1] *Athénæum français*, 3, p. 991, ff., October 21, 1854.
[2] *Athénæum*, 1855, p. 1438.

some of the peculiarities of the newly found Accadian language.[1] He observed, in the first place, the verbs were entirely unchanged in all persons and numbers, while the substantives formed a plural by the addition of *ua* or *wa*. He found also postpositions where we should use prepositions, and this was a resemblance to the Turanian languages, though he would not go so far as Rawlinson in saying to which one of them Accadian seemed most nearly related. A year later Hincks[2] abandoned the name Accadian, preferring to call it by some such name as Old Chaldean. This was his last contribution to the investigation of the inscriptions and the languages which they expressed. On December 3, 1866, he died, leaving behind an imperishable record of painstaking labor, accurate scholarship, and amazing fertility and resourcefulness of mind. To the new science of Assyriology he had made more contributions of permanent value than perhaps any other among the early decipherers. The death of Hincks left Jules Oppert as the leader in the work of unraveling the tangled threads of the new language.

In 1869 Oppert read a learned paper[3] on the origin of the Chaldeans, in which he gave the name Chaldean or Sumerian as the name of the

[1] *Zeitschrift der Deutschen Morgenländischen Gesellschaft* x, p. 516, ff. (1856).

[2] *Atlantis*, iv, 57, ff.

[3] *Comptes rendus de la Société française de numismatique et d'archéologie*, i, 73, ff.

language which Rawlinson had called Accadian. The name Sumerian was judged by many to be more suitable and gradually came into use, though for a short time the designation Sumero-Accadian was in vogue.

Up to this time the study of Accadian or Sumerian had been carried on very largely along historical and geographical lines. No single text had been studied, expounded, and translated until 1870, when Professor A. H. Sayce[1] devoted to a small inscription of Dungi the most elaborate philological exegesis. The words in Accadian were here compared one by one with words of similar phonetic value in more than a score of languages and dialects, and for the first time Accadian loan words were recognized in Assyrian. This paper marked a distinct advance in the study of Sumerian, at the same time that it indicated the position attained by his predecessors in the new study. Sayce had proved a worthy successor of Hincks in philological insight, and had contributed much to the grammatical study of Sumerian. He was speedily followed in this by Oppert, who contributed more grammatical material in two excellent papers.[2]

Up to this time none had dared to compile a Sumerian grammar, though material was rapidly accumulating. But in 1873 Lenormant began to

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[1] "On an Akkadian Seal," *Journal of Philology*, iii, 1, ff., 1871.

[2] *Journal Asiatique*, sér. i, 113, ff., and *Mémoires du I Congrès intern. des Orientalistes*, ii, 216, ff. Paris, 1876.

issue the second series of his *Lettres assyriologiques*,[1] the first part of which contained a complete and systematic grammar of Sumerian. In the section relating to phonetics Lenormant noted the correspondence between *ng* and *m*, and identified *Sumer* (= Sungiri) with *Sennār*, *Shinar* (Gen. x, 10), *Sāmarrah* (Abu 'l-farag, Hist. dyn., ed. Pococke, p. 18), *Sumere* (Amm. Marc. 25, 6). The second part of this book was wholly given up to paradigms, while the third contained an extensive list of cuneiform signs. The fourth and last part was given over to a long discussion of the name of the language, in which Lenormant learnedly opposed Oppert's name of Sumerian, and contended for the older name Accadian. The whole book would in itself make a considerable scholarly reputation, and it was followed by another in an astonishingly brief space of time. In this[2] Lenormant was not directly concerned with the Sumerian language, but in two chapters, entitled "*The People of Accad*" and "*The Turanians in Chaldea and in Western Asia*," he again entered upon the difficult subject. He had now advanced to the view that the Accadian language, as he still insisted upon calling it, must be classified in the Ural-altaic family and considered as the type of a special group. In certain particulars he judged

[1] *Lettres assyriologiques*, II Série: *Études accadiennes*, T. i, en 4 parties. Paris, 1874.

[2] Lenormant, *La Magie chez les Chaldéens et les origines accadiennes*. Paris, 1874–75.

it to have most affinity with the Ugro-finnic, in others with the Turkish languages.

In spite of all that has been achieved by the English and French investigators, the subject was still filled with difficulty, and when Eberhard Schrader, later justly called "the father of Assyriology in Germany," wrote his important book on the Assyro-Babylonian inscriptions[1] he almost avoided it. In this book he must needs refer to the language which appeared in the left column of the syllabaries, but he did not enter into the vexed questions in dispute between Lenormant and Oppert. Two years later, however, in a review[2] of Lenormant he definitely took sides with him against Oppert and adopted Accadian instead of Sumerian. In this he was followed by his distinguished pupil, Friedrich Delitzsch,[3] who contributed some further explanations of the syllabaries.

When the year 1873 drew to its close scholars had reason to feel that the question which had puzzled Hincks in 1850 was settled. They were able to say that all scholars were agreed upon two propositions,[4] namely, 1. The cuneiform method of writing was not invented by the

[1] Schrader, Eberhard, *Die assyrisch-babylonischen Keilinschriften, Kritische Untersuchung der Grundlagen ihrer Entzifferung, Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xxvi, pp. 1–392, 1872; also separately. Leipzig, 1872.

[2] *Jenaer Literatur-Zeitung*, 1, Rec. No. 200, 1874, quoted by Weissbach.

[3] *Assyrische Studien*, Heft 1. *Assyrische Thiernamen mit vielen Excursen und einem assyrischen und akkadischen Glossar.* Leipzig, 1874.

[4] So formulated by Weissbach, *op. cit.*, p. 24.

Semitic Babylonians or Assyrians. 2. It was invented by a people who spoke a language which belonged to the agglutinative forms of human speech. There was indeed still a dispute about the name of the new language whether it should be called Accadian or Sumerian, and there were numerous questions concerning its character, age, literature, and history which might occupy the skill and patience of investigators for a long time, but the main question was settled.

But alas for the danger of overassurance! While Oppert and Lenormant were disputing concerning the name of this ancient language, there lived in Paris an Orientalist, Joseph Halévy, who held distinguished rank as a scholar in the difficult field of Semitic epigraphy. Halévy was not known as an Assyriologist at all, but he had followed every detail of the process of deciphering Sumerian, and watched every discussion of its grammatical peculiarities, and had never from the beginning believed in its existence! On July 10, 1874, the Académie des Inscriptions listened to the first of a series of papers on the Sumerian question from him. Other papers followed on July 24 and August 14.[1] In these Halévy discussed three questions:[2]

1. Granting its existence, does the Accadian language belong to the Turanian family? 2. May

[1] *Comptes rendus de l'Acad. des Inscr.*, iv, sér. 2, 201, 209, 215; see also pp. 261–264. The entire paper is published in *Journal Asiatique*, vii, sér. 3, 461, ff., 1874.

[2] So stated by Weissbach, *op. cit.*, p. 25.

the existence of a Turanian people in Babylonia be conceded? 3. Do these so-called Accadian texts present a real language distinct from Assyrian, or merely an ideographic system of writing invented by the Assyrians? As Weissbach has pointed out,[1] the order of these questions is strange and unmethodical. Halévy should have begun with the third question, and then passed on to the other two. But, whatever may be said of the method, there cannot be two opinions as to the consummate ability of the discussion. Halévy's mind was stored with learning philological, historical and ethnological; he was a dialectician superior to Lenormant or Oppert; he had the keenness of a ready debater in searching out the weakest places in the arguments of his opponents and the skill of an expert swordsman in puncturing them. It was a most daring act for a man not yet known as an Assyriologist to oppose single-handed the united forces of scholarship in the department. Halévy had sought to prove no less a thesis than that all scholars from the beginning of the investigation by Hincks and Rawlinson had been deceived. The signs which they had supposed represented the syllables or words of a language spoken in Babylonia in the very beginning of recorded time were to him but the fanciful product of the fertile minds of Assyrian priests. The cuneiform writing was the invention of Semites, long used

[1] *Ibid.*, p. 25.

by Semites, and the Sumerian words so called were only cryptic signs, invented for mystification and especially used in incantations or religious formulæ.

When Halévy's papers were published not a single Assyriologist was convinced by them, and only one anonymous writer[1] ventured to accept his conclusions. On the other hand, every Assyriologist of note who had had any share in the previous discussions was soon in the field with papers attacking Halévy's positions or defending the ground which but a short time before had seemed so sure as to need no defense. In a few months Lenormant[2] had written a large volume in opposition, while Schrader was content with an able and much briefer paper.[3] Delitzsch, in a review[4] of Lenormant's book, also ranged himself with them, while Oppert,[5] opposing Halévy with all his learning and acuteness, nevertheless continued to argue for his own peculiar tenets against Lenormant, Schrader, and Delitzsch.

The issue was now squarely joined, and earnest

[1] This unknown writer wrote in *Ausland*, Jhg. 47, 941, ff., 1874. I have not succeeded in finding this paper, and quote it on the authority of Weissbach, *op. cit.*, p. 27, footnote 1.

[2] *La Langue primitive de la Chaldée et les idiomes touraniens. Étude de philologie et d'histoire, suivie d'un glossaire accadien*, pp. vii, 455. Paris, 1875.

[3] *Ist das Akkadische der Keilinschriften eine Sprache oder eine Schrift? Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xxix, pp. 1, ff., 1876.

[4] *Lit. Centralblatt*, 1875, column 1075, ff.

[5] *Études sumériennes.* 1. *Sumérien ou accadien?* 2. *Sumérien ou rien? Journal Asiatique*, vii, sér. 5, 267, ff., 442, ff., 1875.

Eberhard Schrader

Father of Assyriology in Germany

Born at Braunschweig, January 5, 1836. Professor in Zurich 1862, in Giessen 1870, Jena 1873, and in 1875 became Professor of Oriental Languages in the University and member of the Academy of Sciences, Berlin. His career began as a student of the Old Testament, but in 1872 appeared his book, *Die assyrisch-babylonischen Keilinschriften*, and thenceforward his great powers were dedicated to the new science of Assyriology.

and able though the replies to Halévy had undoubtedly been, nevertheless, it must be said in justice that they had not driven him from the field. To Lenormant Halévy[1] had replied promptly, and had done much to diminish the effect of that scholar's attack upon his position. The defenders of the existence of the Sumerian language did not agree among themselves on many points, and wherever they differed Halévy skillfully opposed the one to the other in his argument. In 1876 he read before the Académie des Inscriptions, and afterward published, a paper on the Assyrian origin of the cuneiform writing,[2] in which he modified his views somewhat, yet strenuously insisting that the entire system was Semitic. This paper was then reprinted, along with the former publication of 1874, in book form,[3] and with this he began to win some adherents to his views, the earliest being W. Deecke[4] and Moritz Grünwald.[5] That was at least a slight gain, and he was encouraged to press on with fresh arguments.

Meanwhile the lines of those who still believed in the existence of the ancient tongue were clos-

[1] *La prétendue Langue d'Accad est-elle touranienne?* Réponse à M. F. Lenormant, 31 pp. Paris, 1875. Read before the Académie des Inscriptions November 26, 1875.

[2] *Nouvelle Considérations sur le syllabaire cunéiforme, Journal Asiatique*, vii, sér. 7, 201, ff., 1876.

[3] *Recherches critiques sur l'origine de la civilisation babylonienne*, 268 pp. Paris, 1876.

[4] *Lit. Centralblatt*, 1877, 456, ff.

[5] *Ausland*, Jhg. 49, 584, ff., 1876. Quoted from Weissbach, *op. cit.*, p. 39, footnote 3.

ing up. Gradually Oppert's name, Sumerian, was accepted by scholars, foremost among whom were the pupils of Delitzsch, Fritz Hommel, and Paul Haupt, while Lenormant conceded a point and called it the language of Sumer and Accad.[1] In 1879 there appeared a small book[2] by Paul Haupt which may truly be said to open a new era in the whole discussion. Haupt was then a young man of extraordinary gifts, and his handling of the Sumerian family laws showed how to treat a bilingual text in a thoroughly scientific manner. There can be no doubt that Haupt had done much to stem the tide which was threatening to set toward Halévy's position. Nevertheless, in 1880, Stanislas Guyard[3] came over to Halévy, and in 1884 Henri Pognon,[4] these being the first Assyriologists to embrace his views. Between these two dates de Sarzec[5] had been carrying on his excavations at Tello, in southern Babylonia, and had been sending to the Louvre most interesting specimens of his discoveries. In 1884 the first part of his book[6] containing copies of the newly found inscriptions appeared. To Sumerian scholars there seemed

[1] *Journal Asiatique*, vii, sér. 12, 378, f.

[2] *Die Sumerischen Familiengesetze in Keilschrift, Transcription, und Uebersetzung, nebst ausführlichem Commentar und zahlreichen Excursen. Eine Assyriologische Studie*, von Dr. Paul Haupt, pp. viii, 75. Leipzig, 1879.

[3] *Revue critique*, nouv., sér. ix, 425, ff. (31 Mai, 1880).

[4] *Journal Asiatique*, viii, sér. 2, 413, ff. *Revue crit.*, 1884, ii, 47.

[5] See below, pp. 236, ff.

[6] *Découvertes en Chaldée.* Publ. par les soins de Léon Heuzey. 1. Paris, 1884.

no doubt whatever that these inscriptions were written in the Sumerian language. Halévy at once began to explain their strangely sounding words as in reality Semitic, and in 1883, at the International Congress of Orientalists in Leiden, presented a most elaborate paper in which he presented his theory in its fullest and most scientific form.[1] Halévy was not convinced that his views were incorrect by any of the arguments already advanced, neither did the appearance of the de Sarzec monuments and inscriptions move him. His efforts became more earnest, and Guyard's support was likewise full of vigor. Nevertheless, the cause was not gaining, but in the larger view really losing. It was significant that the younger school of Assyriologists were strongly supporting the Sumerian view. Jensen, who was later to be known as one of the most eminent Assyriologists of his time, opposed Halévy's view in his very first work,[2] as did also Henrich Zimmern[3] whose first paper was of even greater importance. Carl Bezold[4] likewise joined with the older school.

But encouragement of the very highest kind

[1] *Actes du VIième Congrès international des orientalistes, tenu en* 1883 *á Leide*, ii, 535, ff. Leide, 1885. Halévy's paper is entitled "*Aperçu grammatical de l'allographie assyro-babylonienne.*"

[2] *De incantamentorum sumerico-assyriorum seriei quae dicitur shurbu tabula VI. Zeitschrift für Keilschriftforschung*, i, 279–322; ii, 15–61; ii, 306–311; 416–425. *Zeitschrift für Assyriologie*, i, 52–68. Also partly reprinted as dissertation. Monachii, 1885.

[3] *Babylonische Busspsalmen.* Leipzig, 1885.

[4] *Kurzgefasste Ueberblick über die Babylonisch-Assyrische Literatur.* Leipzig, 1886.

was even now almost in Halévy's hands. In some notes added to Zimmern's first book[1] Delitzsch took occasion to speak in warm terms of Halévy's very important contributions to the subject, and while not yet ranging himself at his side, declared that his view deserved very close examination. Well might the great French Orientalist rejoice over such a promised accession. When the first part of Delitzsch's Assyrian dictionary[2] appeared every page contained proof that in his case Halévy's long and courageous fight had won. Delitzsch had joined the still slender ranks of the anti-Accadians, and when his Assyrian grammar appeared a whole paragraph[3] was devoted to a most incisive attack upon the Sumerian theory. The accession of Delitzsch is the high-water mark of Halévy's theory. The morrow would bring a great change.

Delitzsch's grammar was received with enthusiasm, as it well deserved to be, but the anti-Sumerian paragraph was severely handled by its critics. In like manner the anti-Sumerian position of the dictionary met with a criticism which indicated that even the great name of Delitzsch was not sufficient to increase confidence in Halévy's cause. Sayce, in a review no less

[1] *Bab. Bussps.*, pp. 113, ff.

[2] *Assyrisches Wörterbuch zur gesammten bisher veröffentlichen Keilschriftliteratur*, u. s. w. 1st. part. Leipzig, 1887.

[3] *Assyrische Grammatik.* Leipzig, 1889, § 25. English edition same date.

remarkable for the range of its learning than for its scientific spirit, protested against Delitzsch's method. Lehmann, in a big book devoted to the inscriptions of a late Assyrian king,[1] devoted an entire chapter[2] to the Sumerian question. In it the whole subject was treated with a freshness and an ability that left little to be desired. Though some minor criticism was passed upon it, none but Halévy dared deny that it marked a step forward in the process of tearing down his elaborate theories.

Lehmann summarized the principal differences between Assyrian and Sumerian in this way:

1. Assyrian inflects, Sumerian agglutinates.

2. In Assyrian the vowels are the most important means of expression, and serve to differentiate the various forms which are derived from the same stem. This is not true in Sumerian, where the verbal stem is unchangeable, and the sound changes are external to it.

3. Assyrian possesses grammatical gender; Sumerian is without it.

4. Assyrian possesses prepositions, Sumerian, on the other hand, postpositions.

5. Assyrian suffixes the pronominal object, Sumerian infixes it.

In the very same year in which Delitzsch's grammar appeared Bezold made a brilliant dis-

[1] *Shamashshumukin König von Babylon*, von C. F. Lehmann. Leipzig, 1892.

[2] *Ibid.*, chap. iv, pp. 57–173.

covery in finding upon an Assyrian tablet the Sumerian language mentioned.[1] In his announcement of this new fact Bezold writes banteringly, asking Halévy to permit the language to live, as the Assyrians had mentioned it by name. Beneath this humorous phrase there lies, however, a quiet note of recognition that the mention was important, though not conclusive as to the main question.

Almost every month after the year 1892 brought some new material to be considered and related to the ever-debated question. The newer discoveries of de Sarzec, the wonderful results of the American expedition to Nippur, the editing of texts found by previous explorers—all these had some link with the Sumerian question. In 1897 Professor Delitzsch, borne down by the weight of fresh evidence, abandoned Halévy's side and once more allied himself to the Sumeriologists. As he had been a great gain, so was he now even a greater loss. Halévy indeed gained others to his side, but none bore so famous a name. The school which he had founded was waning. Though the debate still continues, it has no longer the same intensity. Year by year the question is less and less, "Was there a Sumerian language—were there Sumerians?" and is more and more, "What was the Sumerian language—who were the Sumerians?" Every year seems to justify Hincks, Rawlinson, and

[1] *Zeitschrift für Assyriologie*, iv, pp. 434, f.

Oppert, the great masters who laid the foundations in this increasingly fruitful field. The time indeed has fully come in which Langdon may write a Sumerian Grammar, and Delitzsch supply a complete apparatus for its study, and introductory grammar, a larger and more detailed grammar, a glossary so large as almost to deserve the name of lexicon, and a reading book.[1]

The history of the study of cuneiform inscriptions is complicated by the number of different languages which used the wedge-shaped characters. We have already shown that the cuneiform inscriptions at Persepolis and Behistun were in the Persian, Susian, and Assyrian languages, and we have also set forth at length the long discussion over the question of Sumerian, another language likewise written in the cuneiform characters. The use by four different peoples of wedge-shaped characters may well dispose the mind to accept the statement that still another people wrote their language in similar fashion.

The Armenians have preserved for us among their traditions of Semiramis the statement that she had at one time determined to build a new city in Armenia as the place of summer residence. "When she had seen the beauty of the country, the pureness of the air, the clearness of the fountains of water, and the murmuring of the swift-flowing rivers, she said: 'In such a balmy air, amid such beauty of water and of

[1] See bibliography at the end of Volume II.

land, we must build a city and a royal residence that we may spend the one quarter of the year, which is summer, in the comfort of Armenia, and the other three quarters, during the cold weather, in Assyria.' "[1] Even so late as this present century scholars found the name Semiramis full of mystery and attraction, and were anxious to learn more about her great deeds. About the end of June, 1827, Fr. Ed. Schulz departed from Erzeroum determined to suffer any loss in the effort to find the summer city of Semiramis. There is no need to say that he did not find it, but, like many another searcher, found something far more important. As he went along the borders of Lake Van, then almost unknown to Europeans, he turned in at the gates of the fascinating city of Van and began a search through the remains of its former greatness. Beneath the great citadel of Van was found a small chamber approached by a flight of twenty steps. Above these steps he found inscriptions in the cuneiform character carved in the face of the solid rock. When these had been carefully copied he sought elsewhere and was rewarded with the discovery of still others. In other places in the neighborhood he found more, until he had copied no less than forty-two in-

[1] *Des Moses von Chorene, Geschichte Gross-Armeniens, aus dem Armenischen übersetzt*, von Dr. M. Lauer. Regensburg, 1869, pp. 31, 32. There is an English translation of the *History of Armenia*, or rather the *Genealogical Account of Great Armenia*, of Moses of Chorene (about 430 A. D.), by Winston, London, 1736, 4to, but it is not accessible to me.

scriptions. Schulz was murdered, and when his papers were recovered and brought to Paris the inscriptions were splendidly reproduced by lithography, and published in 1840.[1] At this time the Persian decipherment had indeed been well begun, as had also Assyrian, but none were able to read the new inscriptions for which Schulz had given his life. They were exceedingly well copied, when the difficulties are considered, but so soon as an attempt was made to decipher them doubts arose as to their accuracy. It was soon found that three of the inscriptions were written by Xerxes, and were in Persian, Susian, Babylonian, but the remaining thirty-nine were in some unknown language. In 1840 an inscription in this same language was found by Captain von Mühlbach near Isoglu, on the Euphrates, two hundred and fifty miles west of Van.[2] The copies by Schulz, as well as this new text, came before the eyes of Grotefend in due course, and he was quick to discern that they did not belong to Assyrian kings. This negative conclusion was of some importance as a guidepost, but Grotefend was able to go no further. In 1847 Sir A. H. Layard found another inscription of the same kind at Palu,[3] on the eastern bank of the Eu-

[1] *Journal Asiatique*, 3ème série, tome ix, 1840, pp. 257–323.

[2] *Monatsberichte über Verhandlungen der Gesellschaft für Erdkunde zu Berlin*, i, pp. 70–75; also in *Original Papers read before the Syro-Egyptian Society of London*, i, 1, pp. 131, ff.

[3] Sayce, in *Journal of the Royal Asiatic Society*, new series, xiv, p. 378 (1882).

phrates, about one hundred and eighty miles from Van. It was now clear enough that this new language belonged to a people of some importance in the ancient world, whose civilization or dominion extended over a considerable territory.

There was in these facts an urgent call for some man able to decipher and translate the records and construct a grammar of the language in which they were written. Who should attempt this new problem but that marvelous decipherer of strange tongues, Dr. Edward Hincks? And two papers by him were read before the Royal Asiatic Society, December 4, 1847, and March 4, 1848.[1]

In these papers Hincks determined correctly the meaning of a large number of the characters; found the meaning of such ideographs as "people," "city," and the signification of several words. He further was able to show that the termination of the nominative singular and plural of substantives was "s," while the accusative ended in "*n*." He had thus perceived that the language was inflectional, and went on to argue erroneously that it was Indo-European, or Aryan, as he called it. He read the names of the kings as Niriduris, Skuina, Kinuas, and Arrasnis, but very shortly corrected them into Milidduris, Ishpuinish, Minuas, and Argistis, in

[1] Both papers are published in the *Journal of the Royal Asiatic Society*, ix, pp. 387–449 (1848).

which the error, chiefly in the first name, is very slight. It is difficult to exaggerate the importance of this work, but we may gain some idea of its value by comparing with it Rawlinson's note on the subject published two years later. "There are," says Rawlinson,[1] "it is well known, a series of inscriptions found at Van and in the vicinity. These inscriptions I name Armenian. They are written in the same alphabet that was used in Assyria, but are composed in a different language—a language, indeed, which, although it has adopted numerous words from the Assyrian, I believe to belong radically to another family, the Scythic. There are six kings of the Armenian line following in a line of direct descent. I read their names as: 1. Alti-bari; 2. Ari-mena; 3. Isbuin; 4. Manua; 5. Artsen; 6. Ariduri (?)." In the reading of these names Rawlinson is distinctly behind Hincks, as he was always less keen in the treatment of philological niceties.

For a long series of years Hincks had no successor in the work of decipherment. But every few years new inscriptions[2] were found written in the same language, and each one naturally increased the probability of a successful outcome of the efforts after decipherment.

In 1871 Lenormant[3] took up the task where

[1] *Journal of the Royal Asiatic Society*, xii, p. 475 (1850).

[2] A list is given by Sayce, *Journal of the Royal Asiatic Society*, new series, xiv, pp. 380, 381.

[3] *Lettres assyriologiques*, i, pp. 113–164 (1871).

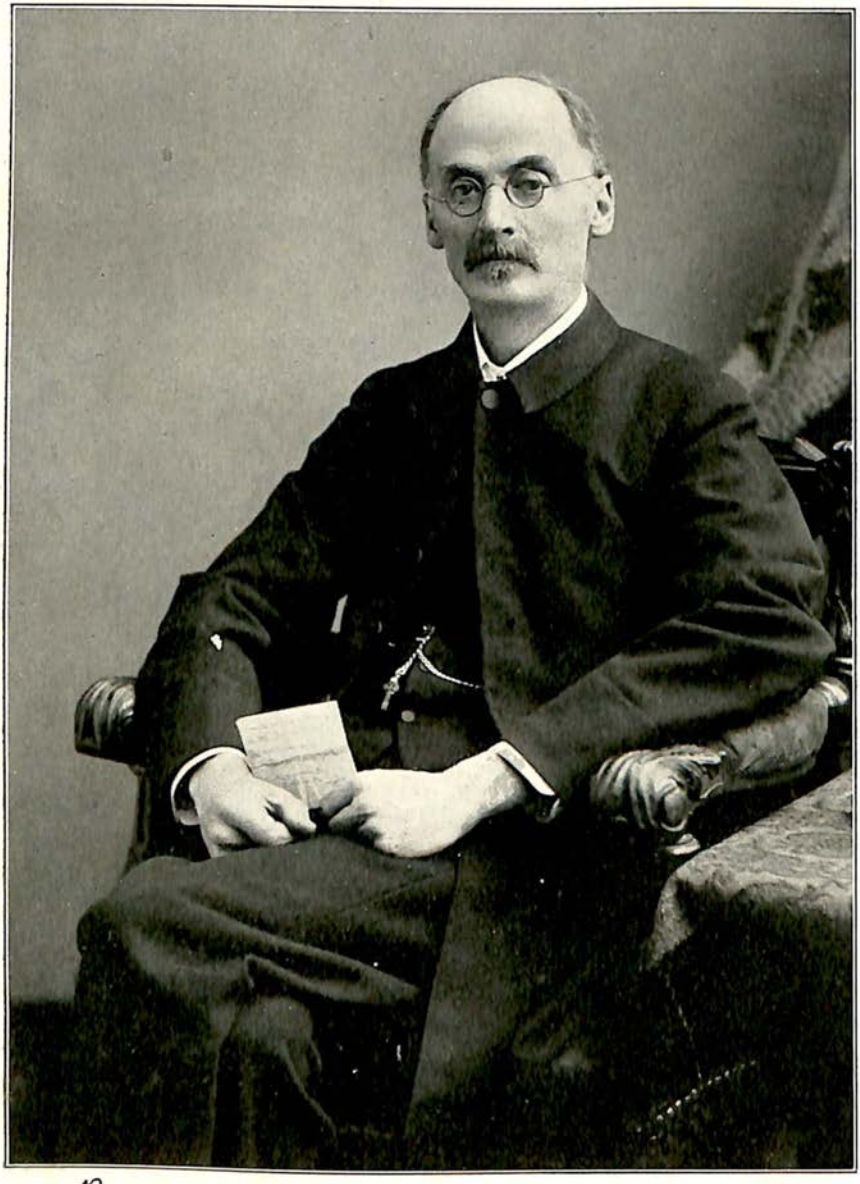
Hincks and Rawlinson had laid it down. His method was scientific, and, like all his work, learned and searching. He first sketched the early history of Armenia, as he had learned its outlines from the Assyrian inscriptions. That was to be the historical basis of his work, and from it he hoped to extract useful geographical material which might help in the securing of names in the Vannic inscriptions. He proposed to call the language Alarodian (Herodotus, iii, 94; vii, 79), and argued that it was non-Aryan, and that its closest modern representative was Georgian. He pointed out that "*bi*" was the termination of the first person singular of the verb, and that *parubi* signified "I carried away."

In the next year Dr. A. D. Mordtmann[1] attacked the question and five years later returned to it again. He determined the meaning of twelve new words, and supplied a most valuable analysis of all the inscriptions, but did not succeed in the translation of a single one of them. Nevertheless, he had made a gain.

The next decipherer was Dr. Louis de Robert[2] (1876), who deliberately cast away all that had been gained by Hincks, Rawlinson, Lenormant, and Mordtmann, and set out afresh upon a totally wrong road. He tried to show that the

[1] *Entzifferung und Erklärung der armenischen Keilinschriften von Van und der Umgegend*, von Dr. A. D. Mordtmann. *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xxvi, pp. 465–696 (1872). *Ueber die Keilinschriften von Armenien. Ibid.*, xxxi, pp. 406–438 (1877).

[2] *Étude philologique sur les inscriptions cunéiformes de l'Armenie.* Paris, 1876.



Professor Rogers
from A. H. Sayce.
Aug. 28/1902.

Archibald Henry Sayce

Professor of Assyriology in the University of Oxford

Born Shirehampton, England, September 25, 1846, of Celtic stock. Fellow of Queen's College, Oxford, 1869, after a brilliant career as undergraduate. Deputy-Professor of Comparative Philology, Oxford, 1876–1890. Hibbert Lecturer, Gifford Lecturer. One of the Founders of Assyriology; Decipherer of the Vannic inscriptions; Original and brilliant expounder of Assyrian philology, religion, and history.

[Photograph by Bassano, London.]

inscriptions were written in the language of Assyria. The result was nothing, and the next worker must return to the methods of the old masters.

Meantime new inscriptions were constantly coming to light. Bronze shields with the name of Rusas were found by Sir A. H. Layard, and excavations near Lake Van by Hormuzd Rassam unearthed still more inscribed objects in bronze. Layard also laid a firmer foundation for future work by recopying more accurately all the inscriptions for which Schulz had given his life.[1]

On the 9th of April, 1880, M. Stanislas Guyard presented to the Société Asiatique in Paris[2] "some observations upon the cuneiform inscriptions of Van." He had noticed at the end of a good many of the inscriptions a phrase in which occurred the word "tablet." He remembered that Assyrian inscriptions frequently ended with an imprecatory formula, heaping curses upon whomsoever should destroy this tablet, and he suggested that here was a formula exactly the same. When he had tested this new clue he found that the words thus secured seemed to fit exceedingly well into other passages, and his guess seemed thereby confirmed.

It is curious that the very same clue as that followed by Guyard had also independently been discovered by Professor A. H. Sayce, who had

[1] *Journal of the Royal Asiatic Society*, xiv, p. 384.

[2] *Journal Asiatique*, 7 sér., tom. xv, pp. 540-543, Mai-Juin, 1880.

been working for several years upon these texts. He had fortunately found out a few more words than Guyard and was able to push on farther as well as more rapidly. The words in which he began to explain his method to the Royal Asiatic Society were strong, but every one was justified by the issue. He says: "The ideographs so freely employed by the Vannic scribes had already showed me that not only the characters, but the style and phraseology of the inscriptions, were those of the Assyrian texts of the time of Asshur-natsir-pal and Shalmaneser II. I believe, therefore, that I have at last solved the problem of the Vannic inscriptions and succeeded in deciphering them, thereby compiling both a grammar and vocabulary of the language in which they are written. Owing to the number of the texts, their close adherence to their Assyrian models, and the plentiful use of ideographs, it will be found that the passages and words which still resist translation are but few, and that in some instances their obscurity really results from the untrustworthiness of the copies of them which we possess."[1]

The long paper which followed these words began with a survey of the geography, history, and theology of the Vannic people, derived very largely from Assyrian sources, but tested and expanded from the native sources which he had just deciphered. After this followed an account

[1] *Journal of the Royal Asiatic Society*, new series, xiv, pp. 377–732.

of the method of writing, an outline of the grammar, an analysis, and a translation of the inscriptions. It was a most remarkable piece of work, as surprising because of its learning as because of its proof of a perfect genius for linguistic combination. It reminds the reader continually of Hincks at his best. The effect of its publication was instantaneous. Guyard[1] reviewed it at length, offering corrections and additions, yet showing plainly enough that the work was successful. Further contributions to the subject were made by Professor D. H. Müller, of Vienna, who had been studying the texts independently both of Sayce and Guyard. More inscriptions also came to light, and in 1888 Professor Sayce was able to review the whole subject, accepting heartily some of the many emendations of his work which had been proposed, rejecting others, and so putting the capstone upon his work. The mystery of the inscriptions at Van was solved. When new texts in the same language should appear men might indeed dispute as to the name of the language whether to call it Vannic or Alarodian or Urartian or Chaldian, but they would at least be able to read it.

So rested the matter of the language of Van until 1892, when Dr. C. F. Lehmann-Haupt[2] began a series of studies in the inscriptions which

[1] *Mélanges d'Assyriologie.* Paris, 1883.
[2] *Zeitschrift für Ethnologie*, 1892, pp. 131, ff.

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Sayce had deciphered, seeking to determine more closely a host of historical and geographical questions which grew out of them. He first demonstrated that the people who had written many of these texts were the same as the Chaldians (Χάλδοι, not *Chaldeans*, who are Χάλδαιοι) of the Greeks. The language was therefore to be called Chaldian, and another difficulty was cleared up. Beginning in 1895, Dr. Waldemar Belck and Dr. C. F. Lehmann-Haupt[1] published a series of papers of great acuteness, working out the life history of this old people, who had thus been restored to present knowledge, clearing up many points previously obscurely or incorrectly set forth by Sayce.

In further pursuit of the studies thus begun Drs. Belck and Lehmann-Haupt[2] departed from Berlin in the summer of 1898 for a journey through Persian and Russian Armenia. They visited Van and carefully collated all the inscriptions previously found by Schulz and others, and found new texts which had been overlooked by all their predecessors. New inscriptions of Assyrian kings, especially of Tiglath-pileser I and Shalmaneser III, were found, and by these, also, our knowledge of Chaldian history was increased. The results of this valuable expedition

[1] *Ibid.*, 1895, pp. 578–616; 1896, pp. 302–308.

[2] *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, 1899, pp. 116–120.

Zeitschrift für Ethnologie, 1898, pp. 227, 414–416, 522–527, 568–592; 1899, pp. 411–420.

have been made known,[1] and it may be regarded as the concluding event in the history of the decipherment of the Vannic inscriptions.

[1] See the letters of both explorers, *Reisebriefe von der Armenischen Expedition. Mittheilungen der Geographischen Gesellschaft in Hamburg*, xv, 1, pp. 1–23, and especially C. F. Lehmann-Haupt, *Armenian Einst und Jetzt*, I. The Einleitung in this book gives further account of the whole expedition and the main portion of the book discusses the problems and their solution.

CHAPTER VIII

EXPLORATIONS IN ASSYRIA AND BABYLONIA, 1872–1914

THE first impulse to excavations in Assyria was given by a German scholar who had established himself in Paris. Julius Mohl cheered on Botta to the work of excavation, and kept him encouraged while it dragged along. During all the time that Layard, Loftus, and their coadjutors worked in the field Mohl watched them from afar, and carefully noted their successes. He was now secretary of the Société Asiatique of Paris, and in his annual reports he told the society of all that had gone on in the great valley amid the graves and ancient cities. In his report for the year 1855 his note was distinctively sad. He recorded the fact that every single expedition which had been sent out to dig had laid down the work or had been recalled. That seemed to him a lamentable circumstance, for to his discerning eye the soil was underlaid with monuments recording the whole life of the vast empires which had held sway in Nineveh or in Babylon. He was impatient to have the excavations resumed, and he called on the governments to take steps to this end.

The future was to confirm Mohl's view fully, and even more than confirm it, of the vast treas-

ures that lay buried. The time, however, for their excavation had not come in the year 1855. Neither governments nor free peoples would carry on excavations for antiquities that were mere unmeaning curiosities when they were found. That work must wait until the decipherment had reached a sure result, and until the work of translation had been so far popularized that the results should be generally known. As a former chapter has shown, the period of doubtful translations ended and the period of surely known results began in 1857. It was only necessary that these matters should be popularized, and that would require some time. This popularization was, fortunately, carried on chiefly, at least in England, by the great masters themselves. Rawlinson, Hincks, Talbot, Norris—a remarkable list of names, surely—these were the men who made known in popular papers or by lectures and addresses the great discoveries in Assyria. Some of these papers struck the old note of Shirley, and revealed the importance of Assyrian studies for the light they were sure to shed upon the Bible. That would be certain to arouse interest in Great Britain and, as before, might result in the beginning of more excavations. The sequel will show how wonderfully this very zeal for biblical study operated in the stimulating of Assyrian research.

A boy, George Smith by name, destined for the work of an engraver, read in the short

spaces of his crowded days the magic words of Rawlinson and the other pioneers, and was moved to begin the study of Assyrian himself. As he himself witnesses,[1] he was first roused to definite study by the interest of biblical history, and with the purpose of doing something for it, he applied in 1866 to Sir Henry Rawlinson for permission to study the original copies, casts, or fragments of inscriptions belonging to the reign of Tiglathpileser. Rawlinson gladly gave the permission, and Smith went earnestly to work. His success was not great with these, but his industry was rewarded by the discovery of a new inscription of Shalmaneser with the name of Jehu upon it, by which he ascertained the year of Shalmaneser's reign in which Jehu had paid his tribute.[2] In this discovery, the first original work which Smith had done, there was one little hint of use to the Old Testament student. Smith had begun as he was to go on. After this discovery Sir Henry Rawlinson was so struck by the young man's success that he

[1] *Assyrian Discoveries*, by George Smith. London, 1875, p. 9.

[2] Smith's report of his first discovery is so interesting in the history of Assyrian study that it is here reproduced entire:

"*Assyrian Inscription.* While examining part of the Assyrian collection in the British Museum I lately discovered a short inscription of Shalmaneser II, king of Assyria, in which it is stated that Jehu, king of Israel, sent him tribute in the eighteenth year of his reign. That he received tribute from Jehu is well known from the black obelisk inscription, but the date of the event has not been previously ascertained. This fact is of chronological interest. I may add that Jehu in this inscription is styled 'Son of Omri,' the same as on the black obelisk."—GEORGE SMITH, *Athenæum*, No. 2031, September 29, 1866, p. 410.

suggested his employment by the British Museum for work in the new Assyrian department. There he was established in the beginning of 1867, and his success was immediate. In his own survey of his work in the museum Smith remembered most vividly the biblical discoveries, and these were they which gave him his first popular reputation and the opportunities of his life. He found on the texts names and notices of Azariah, king of Judah,[1] Pekah, king of Israel, and Hoshea, king of Israel. These stirred his pulses and drove him on even at the peril of his health. The depletion of vital force through constant and difficult work was probably the ultimate cause of his early death, after the brilliant series of discoveries and explorations which were now before him. Smith possessed in unusual degree a gift for decipherment. While still feeling his way along the intricate mazes of cuneiform decipherment there came to the British Museum some copies of the ten undeciphered Cypriote texts. Dr. Birch called his attention to them, and soon he was engaged in an attempt to read them. On November 7, 1871, he read a paper before the Society of Biblical Archæology "On the Reading of Cypriote Inscriptions."[2] The method which he used was similar to the plan of Grotefend, and it was

[1] Later investigation showed that in this name Smith had made a very natural mistake. See below, vol. ii, p. 280.

[2] *Transactions of the Society of Biblical Archæology*, i, pp. 129, ff.

applied with wonderful skill and with surprising results. He had picked out the word for king, though he knew no Greek with which to make comparisons, and had identified forty out of fifty odd characters. A man possessing genius of such order was sure to win fame in the new field of Assyriology.

From 1867 to 1871 discovery followed discovery until Smith's edition of the Ashurbanipal inscriptions appeared. This volume made clear the immense gain to history from the discovery and decipherment of the Assyrian inscriptions, for it contained the accounts of the campaigns and of the building operations of Ashurbanipal. Yet great as all this was, its influence fell far short of that of a discovery which Smith made in 1872. In that year, while working among some fragments brought home by Rassam, Smith picked out a broken clay tablet, upon which he soon read unmistakable parallels to the biblical account of the deluge. The piece thus found was soon followed by three duplicates and other lesser fragments. From these he ascertained that the part first found was the eleventh in a series of twelve tablets, and that it gave the history of a great hero whom Smith called Izdubar, but whose name is now read Gilgamesh. He published the announcement of his discovery, and Ashurbanipal was forgotten, few probably thinking of the great king who had made the library out of which these newly found tablets had

come. But England did not know how to be calm in the presence of such a discovery as this. When Smith had translated enough of the tablets to make a somewhat connected story of the deluge, as the Babylonians told it, he read a paper on the subject before the Society of Biblical Archæology on December 3, 1872. The meeting was large and enthusiastic. Sir Henry C. Rawlinson presided, Smith presented his translation, and then enthusiasm had sway when it was pointed out by Dr. Birch that this had immense importance for the study of the Bible. Again was struck the old note of Shirley, and again that audience responded. Then Mr. Gladstone spoke, showing how valuable all these discoveries were for the study of the origins of Greek culture, which he said had come from the East by way of Phœnicia. This was appreciated, but it was not exactly what the company most desired to hear, and to that phase Mr. Gladstone's last sentence returned, concluding with the magic word "religion."[1] The cheers broke forth then with a good will, and at a late hour the company went away to spread abroad this marvelous story of the discovery of an early

[1] *The Times* (London), December 4, 1872, p. 7. The account of the meeting given above rests chiefly upon the report in *The Times* published the following day. Professor Sayce, however, is inclined to think that the order of addresses in the meeting was somewhat different. Though not present himself at the meeting, he had spent the afternoon with Mr. Smith, and later had a full account of the meeting from Dr. Birch. He believes that it was Mr. Gladstone who emphasized the importance of these discoveries in their bearing upon the Bible, and that Dr. Birch spoke last and not first.

narrative which all thought illustrated, and many believed confirmed and corroborated, the biblical story in Genesis.

The government was urged at once to resume excavations on the site of Nineveh to find more material which might illustrate or confirm the biblical narrative. It did not or could not move instantly, and the public would not wait. The proprietors of the *Daily Telegraph*, a widely circulated journal, moved by the editor, Edwin Arnold, perceived the opportunity and seized it. They offered a thousand guineas to pay the expenses of an expedition to Nineveh on condition that Smith should lead it, and send letters to the paper describing his experiences and discoveries. On January 20, 1873, a month after Norris's death, Smith set out upon his enterprise, and on March 2 he reached Mosul, ready to begin excavations. He soon found that delays were the order of the day, and that the firman had not arrived. He therefore made a trip to Babylon, and on his return began small excavations at Nimroud, April 9. The discoveries made were few, and comparatively unimportant, and this mound was therefore abandoned, and excavations undertaken at Kuyunjik on May 7. On May 14 Smith secured from the same room in which Rassam had found Ashurbanipal's library a new fragment of the Deluge story which fitted into the ones previously found. This fact was considered of sufficient moment to be telegraphed

to London for publication in the paper. Smith was naturally much pleased with the discovery, but was also in the highest degree gratified by the finding of inscriptions of Esarhaddon, Ashurbanipal, and Sennacherib. Two more fragments of the Deluge tablet were shortly afterward found, and then on June 9 the excavations were stopped, as the proprietors of the *Daily Telegraph* were satisfied with the discovery of the Deluge fragments and did not wish to continue farther the work. Smith was much disappointed at this decision, and reluctantly left for England at once with his treasures.

He was, however, sent out again from London on November 25, 1873, by the trustees of the British Museum, who had set apart one thousand pounds for further excavations at Nineveh. Smith reached Mosul on January 1, 1874, and immediately began excavations at Kuyunjik. These were productive of many inscriptions and of interesting archæological materials, but nothing of startling importance as regards the Bible was found. Smith ceased work and left Mosul on April 4. The results were, in other respects, far from insignificant, even though they seemed small in comparison with the greater results of Layard and Rassam. He was able to bring home about three thousand inscriptions belonging to Ashurbanipal's library. Many, indeed, were fragments, but of priceless value because they were often parts of broken texts which had been

recovered earlier by others. Some of these completed or much enlarged texts already in the British Museum which otherwise had left us in tantalizing uncertainty as to the beginning, middle, or end of some document. Here were bits of mythological stories, lines of ancient hymns, litanies, prayers, and syllabaries. Here also were new texts of the Babylonian creation story, and of the mythical exploits of Gilgamesh, and of the youth of Sargon of Agade. Here also were tiny astronomical reports, bits of medical lore, long texts recounting the great deeds of Sennacherib, Esarhaddon, and Ashurbanipal. This was no mean treasure trove, and its value lay precisely in those fields where it best supplemented Layard. It was less rich in objects of art, but it was not to seek these that he had gone to the mounds. Its influence upon public feeling and opinion in England was very great. Men were moved by his spirit, no less than by his words and works, to desire that new excavations should be undertaken. Without such inspiration, it is well to remember, the work might have ceased altogether.

On his return to England he threw himself at once into the most energetic preparation of all his records for the immediate use of the public. The romantic story of his two expeditions was happily set forth in his *Assyrian Discoveries*, which came from the press in the very next year (1875), and was followed in less than a

year by his *Chaldean Genesis*, whose happy and seductive title led many to read the translations which it contained of the Babylonian mythological tales which he had found in the discoveries of Layard and Rassam. Stimulated and supported by public opinion, even before the publication of the last named work, the British Museum again determined to avail itself of Smith's services, and in October, 1875, he set out for Constantinople to seek to obtain a firman which should permit the resumption of his excavations. He was harried with petty annoyances by Turkish officialdom, but at last secured the coveted permission and returned to England to prepare for his third expedition. In March, 1876, he again set out for the East, and proceeded to Baghdad to inspect some antiquities which were offered for sale. It was then his purpose to begin excavations, but the plague had appeared, the country was unsettled, and there was every possible interference made by natives and by Turkish officials. In previous expeditions he had not learned how to deal with Orientals, and alienated their sympathies without impressing them by his power. Ignorant of the laws of health, by which Europeans are so closely bound in the Orient, he worked too much, rested too little, and was careless in the providing of good food suitable for the climate. At times he rode for days eating only crusts of bread. Beset behind and before with difficulties, and not permitted to excavate, he

had to content himself with visits to numerous mounds, which he sketched or planned. On his way back he fell ill of fever, and died at Aleppo, August 19, 1876. Smith's death came to the little world of Assyrian students as a thunderclap out of a clear sky.[1] In England he was looked upon by scholars and people alike almost as a prophet; in Germany,[2] where a new and vigorous school of Assryriologists had begun its work, men were thrown into confusion by the severity of the loss which they felt. It was indeed a sore blow to the new study; but science dare not linger. The ranks closed up at the British Museum by the appointment of Mr. W. St. Chad Boscawen, and the trustees sought a man to begin again the excavations which Smith had laid down.

It was natural that they should turn at once to Rassam. It was indeed a long time since he had worked in the field, for he had been absorbed in diplomatic service. He was now living in retirement in England, but responded immediately to the call for service in the same field as that in which his earliest fame had been won.

In November, 1876, Rassam set out for Con-

[1] See notices of his life in *The Academy*, x, pp. 265, 266 (by Boscawen). *The Athenæum*, No. 2550, September 9, 1876, p. 338. See also *Transactions of the Society of Biblical Archæology*, vi, p. 574. *The Times*, September 5, 1876, p. 4 c.; September 7, 1876, pp. 10, f.

[2] Professor Delitzsch, who was on very intimate terms with Smith, has indicated with sufficient clearness his own sense of loss in the reprinting of portions of Smith's last diary in his great geographical treatise (*Wo lag das Paradies?* pp. 266, 267).

stantinople to seek a firman—the same errand which had cost Smith so many pangs. After a fruitless wait of four months he returned to England, but went out again when Sir Austen Henry Layard became British ambassador at Constantinople. This was indeed a fortunate appointment for Assyrian studies. Layard would be justly expected to exert himself to secure opportunities for further excavation if that was possible. His representations to the Porte were successful, and in November, 1877, Rassam was back in Mosul, where he received by telegraph the news that the firman was granted. His choice of a site for excavations was most happy. The natives had been finding at the hitherto unexplored mound of Balawat, about fifteen miles east of Mosul, fragments of bronze plates, some specimens of which had been sent to him in England. These he had shown to Professor Sayce, who found the name of Shalmaneser upon them, discovered their importance, and advised Rassam to begin diggings at that site. Sayce had thus come into a relation to Rassam similar to that held by Mohl in earlier days to Botta. The result was most successful. Rassam discovered in this mound, from which the fragments had come, the beautifully inscribed and adorned bronze plates which had covered at one time the palace gates of Shalmaneser.[1]

[1] There is now some doubt as to the provenance of these bronze plates. Those which Rassam dug out at Balawât may have been buried there by natives who desired to conceal the place of their origin.

While this work was in progress Rassam had excavations carried on at Kuyunjik and at Nimroud "under trustworthy overseers, whose primary duty was to search for inscriptions." It was at the former that he had the great good fortune to find "buried in a wall, an almost perfect decagon terra-cotta cylinder, covered with nearly 1,300 lines of fine cuneiform characters, detailing the conquests and the extension of the sway of Ashurbanipal."[1] Few inscribed objects, more beautiful or more perfectly preserved, have come out of Assyria. From Nimroud the results were much less important, and in May, 1878, Rassam returned to England to come again in October of the same year. He now received from the Turkish government a firman, obtained by Sir Austen Henry Layard, which enabled him to carry on the most extended excavations, on terms more liberal than had ever been granted before.[2] Leaving overseers in charge at Kuyunjik, Nimroud, and Kalah Shergat, he now entered the great southern field and began to excavate among the ruins of Babylon. His first efforts were made in the mound of Babil, which he thought covered the remains of the hanging-gardens, described by Diodorus and Pliny, but which Koldewey[3] now has determined

[1] Rassam, *Asshur and the Land of Nimrod*, p. 221.

[2] See Rassam's own account of these provisions, *Asshur and the Land of Nimrod*, p. 259.

[3] Robert Koldewey, *Die Tempel von Babylon und Borsippa*, p. 1. Leipzig, 1911.

are really the remains of a late palace of Nebuchadrezzar. In the mounds of Amran ibr Ali and Jumjuma he concentrated his efforts and was rewarded by the discovery of hundreds of small business tablets and, far more valuable, the broken barrel-shaped cylinder in which Cyrus had recounted the fall of Babylon in 538 B. C.

While his workmen continued these excavations, Rassam himself went on to the ruins of Borsippa, and there uncovered "another palace of Nebuchadnezzar,"[1] which has, however, proved to be the much more important and interesting temple of the god Nebo, the tutelary deity of the place. From Borsippa Rassam slipped away to visit Telloh, and then made his way northward to his work in Assyria, which had gone on in his absence, and thence, in May, 1879, returned to England, and a full year elapsed before he was back again at the ruins of Babylon. During the whole time of his absence excavations on a small scale had been carried on by his native representatives, but without notable result. Babylon had apparently been too often plundered to have retained many of its ancient glories, or their work was easy-going as well as unskillful. But, as chance would have it, on the very day of his return a workman retrieved from the debris of ages the fine bronze threshold of Nebuchadrezzar. It made trouble for Rassam, after the usual fashion, before it

[1] Rassam, *op. cit.*, p. 270.

could be removed. "Just," so he says, "as I was starting for my northern journey, I received a telegram from my head overseer at Babylon complaining that the local authorities at Hillah had seized the copper relic and refused to allow it to be taken to Baghdad, alleging that the object was a block of gold. Rumor had spread all over the country that our find at Birs Nimroud was of incalculable value, and it was feared that if the warlike tribes in the neighborhood believed the report they might take it into their heads to plunder it and cause it to be injured." It came away safely at last, and now reposes securely in the British Museum, and on it one reads the simple legend: "I am Nebuchadrezzar, king of Babylon, supporter of Esagila and Ezida, first born son of Nabopolassar, king of Babylon. To Nebo, my exalted lord, who prolongs the days of my life, I have built anew his temple in Borsippa." There in the ruins of the temple of Ezida had Rassam found it after a lapse of nearly twenty-five centuries. Historically more important than this was a terra-cotta cylinder, written by command of Antiochus Soter, first born son of Seleucus, who, in 270 B. C., had restored, for the last time, the shrine of Nebo, in which Nebuchadrezzar had so great pride.

Rassam had now become a superintendent of excavations in many places, dividing his time between Babylonia and Assyria and Armenia, in the neighborhood of Van, and organizing exca-

vations, not indeed upon a large scale, but in many places. His movements over wide extent of territory, his skillful and conciliatory treatment of natives high and low, his keen and tireless search for antiquities, give one an impression of energy, of kindliness, and of ability which his whole face and demeanor amply confirmed.[1]

From the works at Babylon he flitted away to Mosul for a month's oversight and thence to Van for nearly two months, and by the month of September, 1880, was on his way back to Mosul for another six weeks of superintendence. His note upon the work during his absence at Kuyunjik is quaintly illustrative of his point of view. He says quite simply: "I first visited the excavations, and found the gangs hard at work. With the exception of inscribed terra-cotta tablets, nothing had been discovered worth mentioning."[2] He was still anxious for the discovery of big stone objects of great works of art, and did not fully appreciate, as indeed he could not, how great was the importance of these little clay books, which he passes over so lightly.

By the end of November he was again amid the ruins of Babylon. His first words are interesting. "Early the next day I went with

[1] I knew him well for a number of years when he was living in a gentle and beautiful retirement at Brighton, England, and was happy to listen by the hour to his stories of his great days, and to help in the issue of his book from which I have made the extracts quoted in the foregoing pages.

[2] Rassam, *op. cit.*, p. 391.

Dawood Toma over the different works, and examined the localities where collections of unbaked clay tablets had been discovered, and was glad to find that important relics had crowned our labors. I found, to my great vexation, that a large number of the records had crumbled to pieces as soon as they were removed, as they were found in damp soil impregnated with nitre. Had I had an Assyrian copyist with me, we might have preserved, at all events, the history of the documents, though part of the originals would have been lost."[1] So perished much both there and elsewhere in many of the works of the earlier excavators.

And now we approach a second climax in Rassam's labors. The first was surely in the recovery of a portion of Ashurbanipal's library. The second was now to come. The story which leads up to it begins boldly: "After having spent about three weeks at Hillah, Birs Nimroud, and Jimjima, I proceeded northward to see the other ancient mounds which were reported to me to be of immense size. I first visited the mound of what the Arabs call Tell-Ibraheem, situated about fifteen miles to the north-east of Hillah. I have not the least doubt that from its situation and important position between Babylon, Ctesiphon, and Seleucia, it marks the seat of ancient Cuthah. It is an enormously large mound, about three thousand feet in circumference, and

[1] Rassam, *op. cit.*, pp. 395, 396.

two hundred and eighty feet high."[1] There is now little doubt that the identification is correct. After this fortunate hit he set out, in December, 1880, deliberately to search for the site of Sippar. Several proposed identifications with various mounds had not satisfied his ideas of the requirements, nor had he ever heard that George Smith had already proposed Abu Habba as the probable location.[2] Rassam sought it after an archæological method, examining several mounds and deciding against them all until he came to Abu Habba. "I could scarcely believe my eyes," he says, "on looking down and finding everything under my horse's feet indicating a ruin of an ancient city; and if I had had any workmen at hand I would have then and there placed two or three gangs to try the spot. . . . I found, on examining the extent of the ruin, that it was of immense size, though not so high as either Tel-Ibraheem, Babel or Ibraheem-al-Khaleel. It was surrounded by a wall on all sides, excepting the western, where the pyramid, or cone, is situated. On the north and north-east sides, the wall is almost perfect, but on the east and south-east it is not very conspicuous. The inclosure contained an area of about 3,500 square yards."[3] He decided to excavate and, bringing gangs from Babylon, who had already had experience, he set them to work, and in "two or three days"

[1] Rassam, *op. cit.*, p. 396.

[2] *Records of the Past*, First series, v, p. 107, No. 56. London, 1875.

[3] Rassam, *op. cit.*, p. 399.

secured suddenly a great reward. In digging out a chamber a pavement of asphalt was found instead of the more usual stone, marble, or brick. "I, therefore," so he says, "lost no time in having the asphalt pavement broken into and examined, and to the surprise of the workmen, and to my not a little delight, an inscribed earthenware casket, with a lid, was discovered in the southeastern corner of the chamber, about three feet below the surface. Inside it we found a stone tablet, 11½ inches long by 7 inches wide, inscribed minutely on both sides with a small bas-relief on the top of the obverse, representing a deity, which has since been identified by Assyrian scholars with the sun god."[1] Above the god stands a legend which reads: "The image of Shamash, the great Lord, who dwells in Ebabbara, which is in Sippar." Rassam had settled forever the disputed question as to the site of Sippar, and here he was standing in a chamber of its famous temple. In an adjoining room were found "two barrel-shaped inscribed terracotta cylinders, containing a record of Nabonidus," which proved to contain an account of the restoration of this temple, and bore a chronological note which has been a bone of contention among Assyriologists for many years.[2] Besides these larger finds, clay tablets, mostly unbaked, poured out of the uncovered chambers,

[1] Rassam, *op. cit.*, pp. 401, 402.

[2] See below, p. 494.

and those that seemed likely to crumble away, as had others before, Rassam actually baked and so preserved them from decay. The very success of his energetic campaign excited the natives in the neighborhood, who made various efforts to stop his work, and though failing to do it, gave him no little trouble. On went the work until he had laid bare about one hundred and thirty chambers and halls out of perhaps three hundred which made up the great complex of the temple. And now it was almost time for the expiration of his firman, and in May, 1881, he set out for Constantinople and for England, leaving to native superintendents the further work upon the ruins of Sippar.

In April, 1882, he was back again at Abu Habba, and writes a summary of the results in these few sentences: "Our excavations at Abu-Habba were carried on without any interruption for eighteen months altogether, during which time we must have discovered between sixty and seventy thousand inscribed clay tablets, a large number of which fell to pieces before we could have them baked." His efforts to secure an extension of his firman failed, and the work ceased by expiration of time, and he was again in England on the 20th of December, 1882.

It was now five years since Rassam had begun this great series of expeditions, and the record was closed. He was never again to live among the simple-hearted people of the desert, whom

he loved and understood so well. For thirty years he was yet to live in happy retirement in his adopted land of England, and when he slipped away he was the last of the great early explorers, whose labors had restored peoples and literatures long lost.

While Rassam was busy a new discoverer appeared in the East and very quietly began his work. M. Ernest de Sarzec was appointed French consul at Bassorah, on the Persian Gulf, and entered upon his duties in January, 1877. He had been in Abyssinia and had served in Egypt. He knew the desert and its people, and he carried to his new post strong enthusiasm for archæological work. Two months after he entered Bassorah de Sarzec had begun excavations at Telloh—a mound four miles in length, lying in the great alluvial plain of southern Babylonia, about five miles from the banks of the Schatt-el-Hai, and sixty miles north of Mugheir. On this mound de Sarzec worked from March 5 to June 11, 1877, and again from February 18 to June 9, 1878. In July, 1878, he returned to Paris and found himself famous. He went again and worked in the mound from January to March, 1880, and also November 12, 1880. to March 15, 1881. So great was his success that the French government came to his aid, and he went on with campaigns in 1888, 1889, 1893, 1894, 1895, 1898, 1900. His work was thus prolonged over a considerable period, and instead of merely run-

Seated figure of Gudea represented as an architect with the plan of a great building on a tablet lying on his lap.

[The Museum of the Louvre, Paris.]

ning trenches hither and thither, he dug systematically over a large part of the mound. The results were full of surprises to the guild of Assyrian students, and were indeed almost revolutionary. He uncovered a fine temple, whose outer walls were one hundred and seventy-five feet long and one hundred feet broad, erected upon a vast mound from sixteen to twenty feet high. The outer wall was five feet thick, built of great baked bricks one foot square, bearing the name Goudea. These bricks were tightly fastened together by bitumen. In the interior he found thirty-six rooms, chiefly small in size, though one was fifty-five by sixty-five feet. In almost every room there were found objects of interest or of instruction for the study of the history of early Babylonia. In one room alone there were found no less than eight diorite statues, from an early period of Babylonian art, which had been unfortunately mutilated by some later barbarians, for all were headless. The valuable inscriptions were, however, in perfect preservation. In another part of the mound during the very first season there were found two beautiful terra-cotta cylinders, each twenty-four inches in length by twelve in diameter. Each of these contained no less than two thousand lines of inscription, forming thus the longest inscriptions from an early period then known. De Sarzec's work was done in masterly fashion, and when the inscriptions and objects of art

were brought to Paris and deposited in the Louvre, it was felt that indeed a new era had opened for French archæological study. Quarters were fitted up in the Louvre, and these objects found a place beneath the great roof, together with the discoveries of Botta, the pioneer. They did not receive the same acclaim as Botta's discoveries had done in France, or Layard's in England, but they were even of greater value scientifically. From the inscriptions the early language of the Sumerians was more perfectly learned, and from the statues and reliefs some faint idea was first conceived of the appearance of the great people who had laid the foundations of civilization in southern Babylonia. That was a distinguished service which de Sarzec had rendered. It alone was sufficient to give him high place on the roll of those who had made Babylonia live again.

Again and again since 1881 has de Sarzec resumed his work at Telloh, and every year has he brought forth from the same mounds fresh discoveries of moving interest. In 1894 the spades of his workmen struck into a chamber from which were taken no less than thirty thousand tablets—a vast hoard of archives mostly of a business character and relating to trade, commerce, agriculture, and industry, with a goodly number of temple documents and religious notices. The mass of tablets was so great that it was not possible to protect them from

the thieving propensities of the natives, and many thousands were stolen, to be sold and scattered all over the world both in public museums and in private hands. While this is to be deplored, it is perhaps safe to expect that in the end very few of them will be lost to science. With this exception de Sarzec has been successful in securing for the Louvre an important part of the brilliant results of his explorations.

In this same year he discovered the remains of a great building with double walls, erected by Ur-Nina, doubtless correctly explained by Heuzey[1] as a storehouse for grain or fruit, the double walls with an air space between them being intended to prevent the entrance of vermin, and as these walls were separated by a space of two and a half feet they provided a store-place for tools, measures, and the like. The walls and floors of this corridor had been well covered with asphalt, and the inner rooms were therefore also preserved against wet. This building had apparently perished in fire, and above its remains a later king had laid a platform of bricks and asphalt for another building.

It is not too much to say that de Sarzec's discoveries had yielded a new period to human history, for to him we owe our first knowledge of the great kings Ur-Nina, Eannatum, Entemena, and others of their period who made and

[1] *Une Villa Royale Chaldéenne* vers l'an 4000 avant notre ère, d'après les levés et les notes de M. de Sarzec par Léon Heuzey. Paris, 1900.

lived in a civilization worthy in essential points to be compared with the glorious age of Hammurapi, which was to follow so many years later.

Few explorers have ever been more fortunate in support at home. As the products of the spade came to Paris a whole new department was created in the Louvre for their reception, with Léon Heuzey as director. To him fell the great and honorable task of publishing the results, which he achieved in a manner so sumptuous as well as scientific as to be worthy of the best traditions of French archæology.[1] In June, 1901, de Sarzec died, leaving a distinguished memory, and much material unearthed from the gloomy mound where he had worked so long.[2]

Nearly two years passed by before a successor was found in Commandant Gaston Cros, who reached Telloh January 3, 1903, and took up the work which de Sarzec had laid down, and continued his first campaign until the end of May. In this campaign he had the good fortune to discover a complete statue in green diorite of King Goudea,[3] represented in a seated position, with an inscription recounting his building of the temple of E-ninnu and of the temple of E-pa

[1] Léon Heuzey, *Découvertes en Chaldée*, folio, Paris, 1884—.

[2] Compare Thureau-Dangin, *Note sur la troisième collection de Tablettes découverte par M. de Sarzec à Telloh. Comptes Rendus, Académie des Inscriptions*, p. 77, f. Paris, 1902.

[3] Léon Heuzey et F. Thureau-Dangin, *Nouvelles Fouilles de Tello par le commandant Gaston Cros.* Livraison I. Paris, 1910, pp. 21–25 and pp. 26–28. With handsome plate of the Goudea statue in Livraison II. Paris, 1911.

for the goddess Ninâ. The head had been broken off in a fall, but was readily replaced, and was interesting as the first complete statue of the king which had been found. Though but seventeen and a half inches in height, it belongs to the greatest monuments of the Sumerian people. In 1904 and in 1905 the work of Cros was devoted largely to topographical exploration in which the work of de Sarzec was carried forward and the plan of the city came more and more to light, though many inscriptions of the dynasties of Ur and of Agade rewarded the explorer. In the former year was found an exquisitely beautiful statuette of steatite, representing a dog bearing a vase on his back and inscribed with the name of Sumu-ilu, king of Ur, who was previously unknown;[1] and in 1905 fragments of seven stelæ of Goudea,[2] as well as many small texts of Ur-Engur and of other persons of the early dynasties.

The fourth campaign was in the winter and spring of 1909, and met with uncommon difficulties from the neighboring Arabs aroused to a pitch of high excitement by the changes in the government of the Turkish empire. Cros nevertheless had a successful year, of which the most important results were the discovery of the

[1] Heuzey and Thureau-Dangin, *Nouvelles Fouilles de Tello* II, pp. 157–159, 160–166.

[2] Léon Heuzey, *Une des sept stèles de Goudéa*, Fondation Eugène Piot, Monuments et Mémoires, xvi, p. 5, f. Paris, 1909. Compare also *Comptes Rendu de l'Académie*, 1908, pp. 808, 809.

immense walls of defense about the citadel built by Goudea, and rising in two stages to a height of twenty-six feet, with the outer surface inclined, and supported by towers at intervals. Both on the outside and the inside this wall was followed for a distance of three hundred feet, forming a most valuable topographical index of the city at the north.[1]

It is a pity that no further campaigns by Cros have been reported. His work was a most successful continuation of de Sarzec's labors.

During all this long period of exploration and excavation, carried on by almost all the nations of Europe, there have been developing in America schools of students of the languages, history, and religions of the ancient Orient. It was natural that in America, also, men should begin to talk of efforts to assist in the great work of recovering the remains of Babylonian and Assyrian civilization. In 1884, at meetings of the American Oriental Society and of the Society of Biblical Literature and Exegesis, conferences were held upon this subject in which Professor John P. Peters, of Philadelphia, the Rev. Dr. William Hayes Ward, Professor Francis Brown, and Professor Isaac H. Hall, of New York, and Professors C. H. Toy and D. G. Lyon, of Harvard University, were participants. These and other gentlemen finally formed an organization,

[1] Léon Heuzey, *Rapport sur la Mission Française de Chaldée*, Comptes Rendus de la Académie des Inscriptions et Belles-Lettres. Paris, 1910. Pp. 152–157.

afterward connected with the Archæological Institute of America, for the purpose of raising funds to send out to Babylonia an expedition to explore the country and see where excavations might profitably be undertaken. Miss Catherine Lorillard Wolfe, of New York, gave five thousand dollars to defray the expenses of this preliminary exploration, and on September 6, 1884, the Wolfe expedition to Babylonia departed from New York.[1] The personnel of this expedition consisted of Dr. William Hayes Ward, Mr. J. H. Haynes, then an instructor in Robert College, Constantinople, and Dr. J. R. S. Sterrett. They traveled over much of the land of Babylonia, visiting sites where excavations had previously been made, as well as scores of mounds that had not yet been examined by archæologists. Upon his return, in June, 1885, Dr. Ward earnestly recommended that an expedition be placed in the field to engage in the actual work of excavation. He advised that Anbar be the site chosen for this purpose,[2] but spoke with enthusiasm of the opportunities in

[1] See "Report on the Wolfe Expedition to Babylonia, 1884–85," by William Hayes Ward, *Papers of the Archæological Institute of America*, Boston, 1886, and also "The Wolfe Expedition," by Rev. W. H. Ward, D.D., LL.D., *Journal of the Society of Biblical Literature and Exgesis*, June to December, 1885, pp. 56–60. The diary of Dr. Ward is published in part by Dr. Peters in *Nippur*, vol. i, Appendix F, pp. 318–375.

[2] *Journal of the Society of Biblical Literature*, p. 60. On this mound of Anbar compare a most interesting note by Sir Henry Rawlinson quoted in *Nippur* by John P. Peters. New York, 1897, vol. i, pp. 178, 179. Rawlinson reached the negative result that Anbar could not be identified with any Assyrian or Babylonian site.

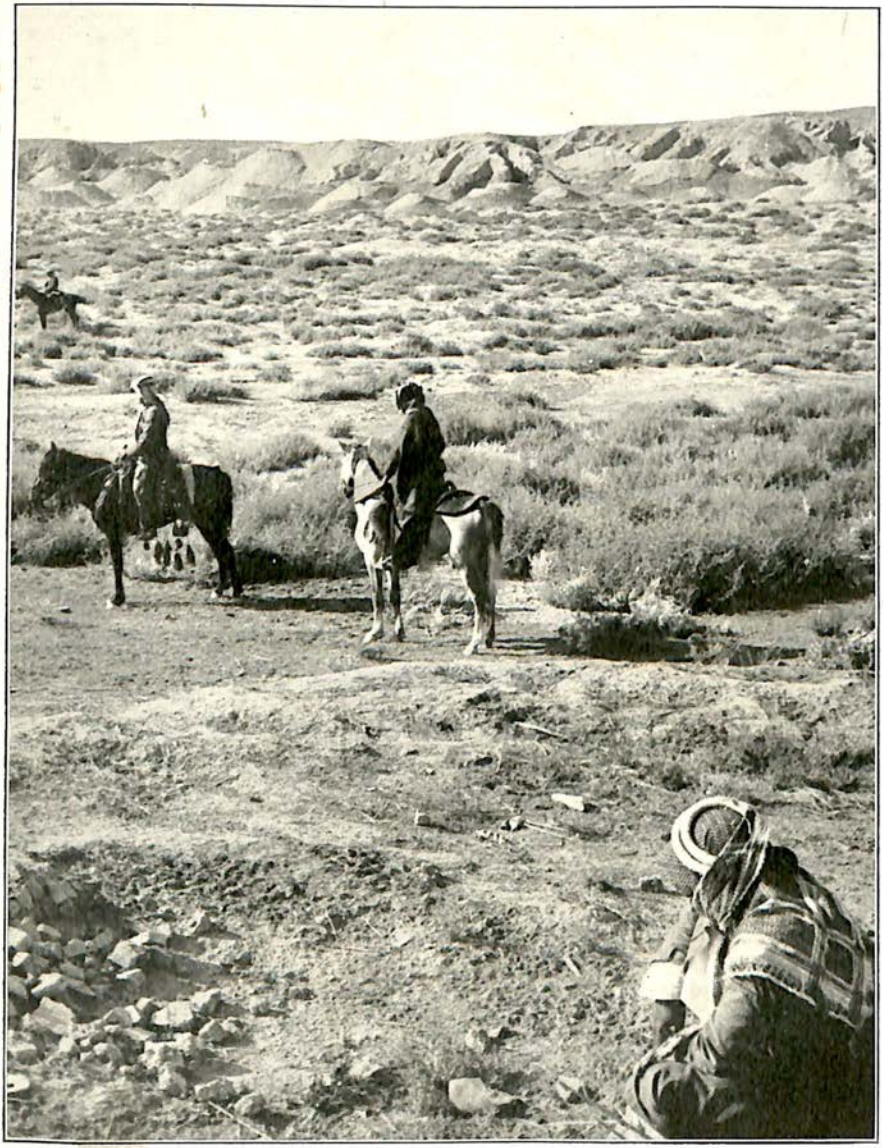
other places, among them at Niffer, then erroneously identified with ancient Calneh, of which he said, "There nothing has been done; it is a most promising site of a most famous city."[1]

The report of Dr. Ward bore no immediate fruit, but the leaven was steadily working, and efforts were proceeding in several directions to secure funds to undertake excavations. The labors of Dr. John P. Peters at last bore fruit, and an expedition was sent out by the University of Pennsylvania which departed from New York June 23, 1888. Of this company Dr. Peters was director, and Professors Hermann V. Hilprecht, of the University of Pennsylvania, and Robert F. Harper, of the University of Chicago, were Assyriologists, Mr. Perez Hastings Field, architect, and J. H. Haynes, business manager, commissary, and photographer. It was, however, long ere the expedition could come to its work. There were the usual delays in securing permission from the Imperial Ottoman government; there were difficulties in the gathering of equipment and in the assembling of the staff; there was a shipwreck of part of the expedition on the island of Samos, and perils of health and of life during the long journey overland to southern Babylonia.[2]

At last, on February 6, 1889, excavations were

[1] *Papers of the Archæological Institute*, Report of Dr. Ward, p. 29

[2] See the lively narrative of Peters, *Nippur*, vol. i, pp. 1–241.



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The Mound of Nippur.

begun on the mount of Nuffar, or Niffer, the site of ancient Nippur, and continued until April 15, with a maximum force of two hundred Arabs. The difficulties were enormous, for there were constant struggles with some of the native tribes, with many individuals among them, and with sundry Turkish officials. But in spite of all this the expedition made a trigonometrical survey of all the mounds and won from them more than "two thousand cuneiform tablets and fragments (among them three dated in the reign of King Ashuretililani of Assyria), a number of inscribed bricks, terra cotta brick stamp of Narâm-Sin, fragment of a barrel cylinder of Sargon of Assyria, inscribed stone tablet, several fragments of inscribed vases (among them two of King Lugalzaggisi of Erech), door socket of Kurigalzu, about twenty-five Hebrew bowls, a large number of stone and terra cotta vases of various sizes and shapes, terra cotta images of gods and their ancient moulds, reliefs, figurines, and toys in terra cotta, weapons and utensils in stone and metal, jewelry in gold, silver, copper, bronze, and various precious stones, a number of weights, seals, and seal cylinders."[1] It is an excellent record, yet to Dr. Peters it seemed that the first year's work "was more or less of a failure so far at least as Nippur was concerned."[2] This judg-

[1] This summary of the year's operation is quoted from Hilprecht, *Old Babylonian Inscriptions, Chiefly from Nippur*, vol. i, part ii. Philadelphia, 1896, p. 8.

[2] Peters, *Nippur*, vol. i, p. vii.

ment is probably influenced by the great difficulties with the Arabs which embittered the last days of the work.[1] It was successful, though far surpassed in importance by that which was to follow.

From January 14 to May 3, 1890, the University of Pennsylvania expedition was again at work at Nippur, with Dr. Peters as director, and Mr. Haynes as business manager, and with a maximum force of four hundred Arabs. During this season about eight thousand inscribed tablets were taken from the ruins as well as antiquities of other kinds in large numbers.[2] It was a brilliantly successful year in every particular, being also less disturbed by troubles with the Arabs than the former. All these antiquities were sent to Constantinople for the Imperial Museum, though later considerable portions of them were presented to the museum of the University of Pennsylvania as a personal gift of the sultan. This gracious act arose directly out of the dignified and generous course pursued by the authorities of the University of Pennsylvania. They had honestly handed over the antiquities to the Constantinople authorities, as indeed they had promised to do, but had gone much further than this. Professor Hilprecht was sent to Constantinople to catalogue these same collections

[1] See Peters, *ibid.*, vol. i, chap. xii; *The Catastrophe*, pp. 279, ff.

[2] See the summary by Hilprecht in *Old Babylonian Inscriptions*, vol. i, part ii, p. 8, and compare the full and entertaining narrative of Peters, *Nippur*, vol. ii, *passim*.

for the Imperial Museum. This work was done with great skill, but also with such tact as to call forth expressions of gratitude from all who were connected with the museum. By gifts of antiquities to the museum in Philadelphia, of which Professor Hilprecht was himself a curator, the sultan aimed to repay the University of Pennsylvania for this free gift of his services.

For a time excavations at Nippur were intermitted, but on April 11, 1893, the University of Pennsylvania had another expedition in the field under the directorship of Mr. J. H. Haynes. Then began one of the most important of all the long series of expeditions in Babylonia or in Assyria. Haynes remained steadily on the ground at work until February 15, 1896, with a short break from April 4 to June 4, 1894. Never before had a European ventured to carry on excavations through a hot season. Professor Hilprecht has not spoken too cordially in saying that "the crowning success was reserved for the unselfish devotion and untiring efforts of Haynes, the ideal Babylonian explorer. Before he accomplished his memorable task, even such men as were entitled to an independent opinion, and who themselves had exhibited unusual courage and energy, had regarded it as practically impossible to excavate continuously in the lower regions of Mesopotamia. On the very same ruins of Nippur, situated in the neighborhood of extensive malarial marshes, and 'among the most

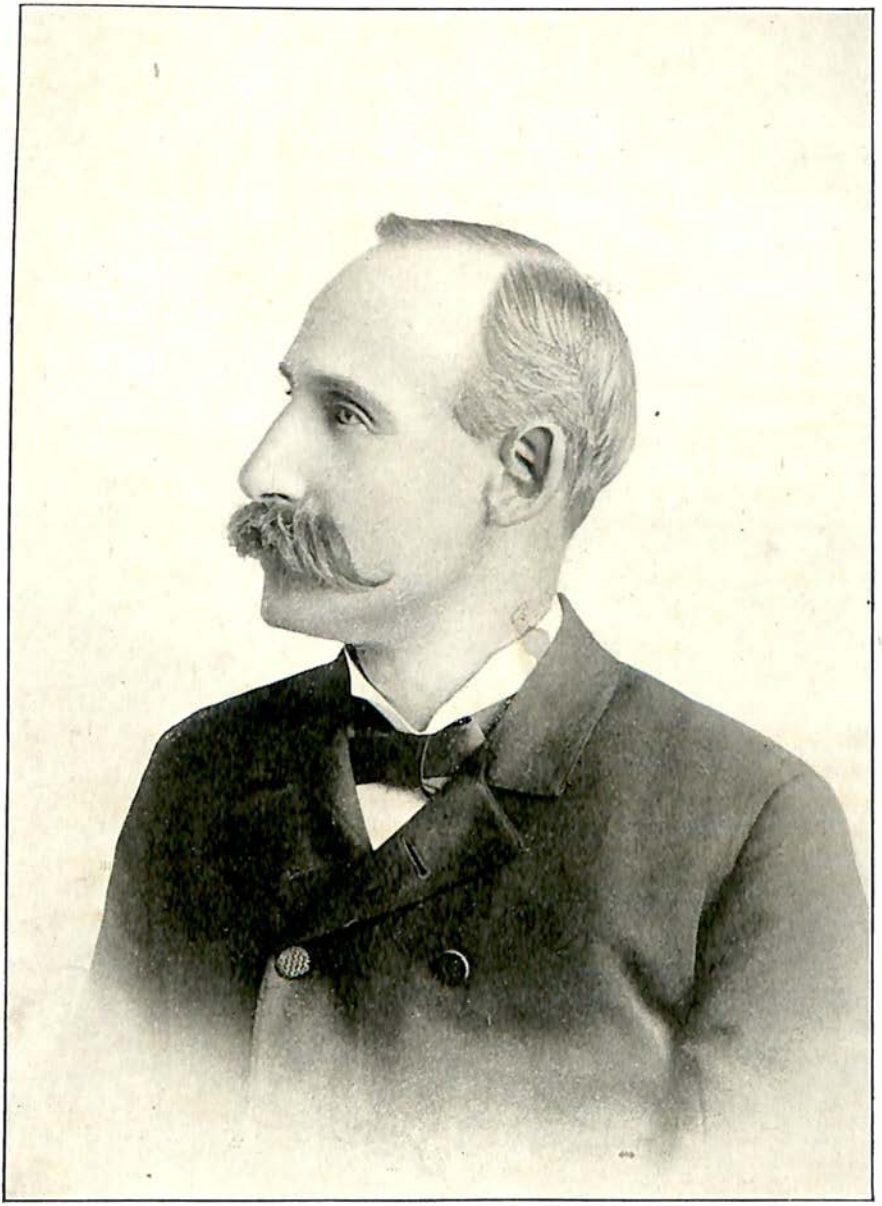
wild and ignorant Arabs that can be found in this part of Asia,"[1] where Layard himself nearly sacrificed his life in excavating several weeks without success,[2] Haynes has spent almost three years continuously, isolated from all civilized men, and most of the time without the comfort of a single companion. It was indeed no easy task for any European or American to dwell thirty-four months near these insect-breeding and pestiferous Affej swamps, where the temperature in perfect shade rises to the enormous height of 120° Fahrenheit (= c. 39° Réaumur), where the stifling sandstorms from the desert rob the tent of its shadow and parch the human skin with the heat of a furnace; while the ever-present insects bite and sting and buzz through day and night; while cholera is lurking at the threshold of the camp and treacherous Arabs are planning robbery and murder—and yet during all these wearisome hours to fulfill the duties of three ordinary men. Truly a splendid victory, achieved at innumerable sacrifices, and under a burden of labors enough for a giant; in the full significance of the word a *monumentum aere perennius.*"[3]

During the third campaign of the University of Pennsylvania about twenty-one thousand cu-

[1] Layard, *Nineveh and Babylon*, p. 565.

[2] Layard, *l. c.*, pp. 556–562. "On the whole I am much inclined to question whether extensive excavations carried on at Niffer would produce any very important or interesting results" (p. 562).

[3] Hilprecht, *Old Babylonian Inscriptions*, vol. i, part ii, p. 10.



John Henry Haynes

Born June 27, 1849; died June 29, 1910. Archæological explorer Assos, 1881–1882; Nippur, 1889–1890, 1893–1896, 1899–1900.

[From photograph presented to Professor Rogers by Professor Albert T. Clay, Yale University.]

neiform tablets and fragments were taken out of the mound, and besides these there were found large numbers of antiquities of other kinds, all of great importance in the reconstruction of the past history of Babylonia. Among these were large numbers of vases and fragments of vases from the very earliest period of history, drain tiles, water cocks, brick stamps, beautiful clay coffins glazed in tile fashion and finely preserved, and diorite statues and fragments.[1]

After a brief and necessary interruption, the Philadelphia expedition began work again in February, 1899, with Dr. J. H. Haynes as manager and Messrs. Geere and Fisher as architects. In January, 1900, Professor Hilprecht reached Nippur and took charge as scientific director. Under his direction "an extensive group of hills to the southwest of the temple of Bel" were systematically excavated. From the same location about twenty-five hundred tablets were taken in the first campaign, and later excavations had increased the number to about fifteen thousand. Within six weeks "a series of rooms was exposed which furnished not less than sixteen thousand cuneiform documents, forming part of the temple library during the latter half of the third millennium B. C."[2]

From these four campaigns had come a vast store of literature of all kinds; here were letters

[1] Compare the summary in Hilprecht, *ibid.*, p. 9.

[2] Hilprecht, "Latest Research in Bible Lands," *Sunday School Times*, May 5, 1900, p. 276.

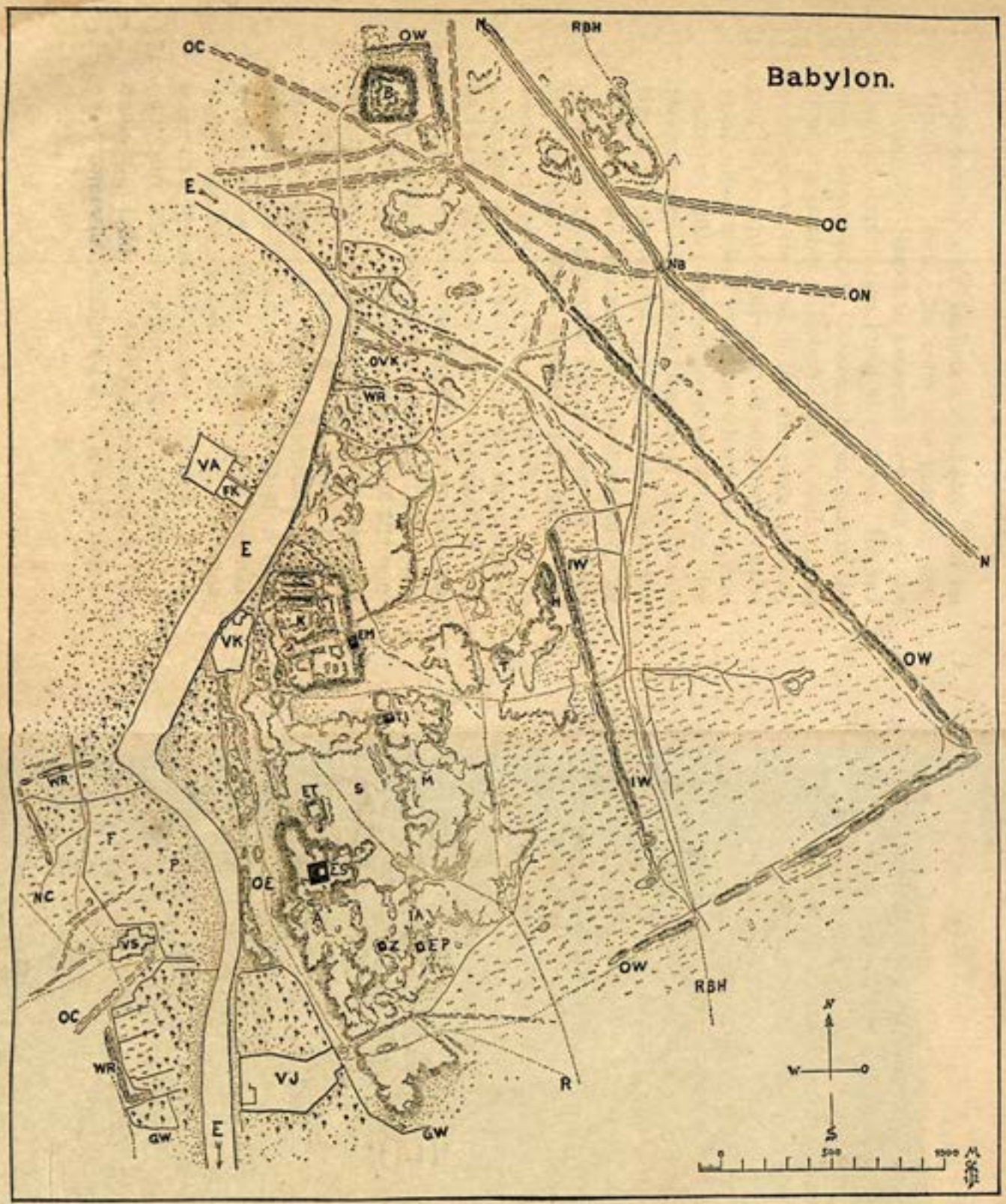
and dispatches, chronological lists, historical fragments, syllabaries, building and business inscriptions, astronomical and religious texts, votive tablets, inventories, tax lists, and plans of estates. Few expeditions had ever been more successful and none had ever been more warmly supported at home. Fortunate in its directors at home, rich in the scientific directorate of Professor Hilprecht, the results attained have been worthy of all the expenditure of energy, life, and treasure.

One expedition inspires another, and it was surely probable that the University of Pennsylvania explorations at Nippur would awaken enthusiasm and induce others to essay great tasks. The next American excavator proved to be Dr. Edgar James Banks, who had received his early training in Semitic languages and history in Harvard University and had carried forward his knowledge of Assyrian under Professor Friedrich Delitzsch, father of modern Assyriology, as his predecessor, Eberhard Schrader, was of its beginnings in Germany. Banks began his patient, devoted, and ultimately successful efforts after the archæologist's career by securing appointment as American consul at Baghdad in 1898. As this gave him no opportunity to excavate, he resigned, returned to America, and in the winter of 1899 was appointed Director of the Ur expedition, which had been organized with President William Rainey Harper, of the

University of Chicago, at its head and supported by President Henry Morton, of the Stevens Institute, Bishop Potter, Cornelius N. Bliss, Dr. John P. Peters, of the Nippur expedition, and others. Banks reached Constantinople on January 15, 1900, and began to sue, through the American minister, for an *iradé* from the sultan to excavate at Mugheir, the site of ancient Ur of the Chaldees. After a tedious wait, the application was finally rejected by the sultan, because the Arabs of the surrounding country were in rebellion. Banks at once applied for permission to excavate at Birs, the site of Borsippa, which was rejected because the mound lay within the district already granted to the German Orient Society. Banks then applied for Tell Ibrahim, the mound that covers Cutha. After long delays this also was refused, and then he applied for Bismya, or Bismâya, as it has also been called. In the meantime the Ur expedition had dissolved in America, and a new organization had been formed endowed with a gift of one hundred thousand dollars by John D. Rockefeller and known as the Oriental Exploration Fund of the University of Chicago, with President W. R. Harper at the head and Professor Robert Francis Harper as director of the Babylonian and Assyrian section. This new society, organized with Harper's well known skill, applied to the Sublime Porte for permission to excavate at Senkereh, the site of Larsa, or Ellasar. This was

pigeon-holed after various vicissitudes, and on October 3, 1903, the *iradé* was granted, permitting Dr. Banks to excavate in behalf of the Oriental Exploration Fund at Bismya. He had spent three years in Constantinople, part of the time as a teacher in Robert College, and part as a member of the staff of the American legation, and the reward for all his trials ought surely to be great. Few indeed would have borne them, and waited on with perseverance so remarkable. He was now appointed Field Director of the University of Chicago expedition and ordered into the field, and on Christmas Day, 1903, began to dig upon the large mound at Bismya, beneath which lay probably some ancient Babylonian city whose very name was not yet known.

As the mound was far from the river, a well had to be dug to supply the workmen with water, and when this was successfully accomplished the work began in earnest, and on the very first day a building brick, torn from the edge of the temple platform, was found to contain the name of Dungi, king of Ur (circa 2350 B. C.). On January 26, 1904, the diggers unearthed a fine ancient statue, headless, but otherwise in good general preservation. A month later the head was found, and fitted to the body, the whole being then about 34½ inches in height. It is of some sort of soft, white marble, "the head is round and bald; the face is beardless; the features, somewhat disfigured by a growth due to



Plan of the Ruins of Babylon, after Koldewey.

A the mound "Amran."
B the mound "Babil."
E the Euphrates.
EM E-Mach, the temple of Ninmach.
EP E-Patutila, the temple of Ninib.
ES E-Sagila, the temple of Marduk.
ET E-Temenaki, the tower of Babylon.
F Fields.
FK Farm Kabaret.
G Grave of Amran ibn Ali.
GW Garden wall.
H the mound "Homera."
IA the district "Iahin aswad."
IW Inner city wall.
K the mound "Kasr."
M the district "Merkes."
N the canal Nile.
NB the Nile Bridge.
NC the New Canal.
OC Old Canal.
OE Old Euphrates bed.
ON Old Nile Canal.
OVK Old village Kweiresh.
OW Old city wall.
P Palms.
R Road.
RBH Road from Baghdad to Hillah.
S the district "Sachn."
T the Greek Theater.
TI Temple of Ishtar of Agade.
VA Village of Ananeh.
VJ Village of Jumjuma.
VK Village of Kweiresh.
VS Village of Sinjar.
Z Temple "Z" of an unknown divinity.

the saltpetre in the soil, are of a Sumerian type." On the upper right shoulder is an archaic inscription bearing the words "E-sar, mighty king, king of Adab," and so the city which Banks was excavating was Adab, and here was the statue of one of its ancient kings, apparently nearly contemporaneous with Ur-Nina, king of Lagash, at about 3000 B. C.

The remains of the temple of Adab, found by Banks, revealed a long period of history. The upper part was built or restored by Ur-Engur and Dungi, his son, about 2400 B. C. Beneath these were the bricks of Sargon and Naram-Sin, and beneath these again the plano-convex bricks of early and unknown Sumerian kings. No remains of the work of Hammurapi were found, though the king has assured us in the prologue of his great code of laws that he was the "king who gave life to the city of Adab; the benefactor of the temple E-makh."[1]

Small fragmentary walls uncovered were pronounced a portion of a palace by Dr. Banks, and among them appeared building bricks with the name of Gimil Sin, about 2300 B. C., and the fourth king of the dynasty of Ur. A portion of the ancient city seemed to have been given up to residence during the Semitic period, for a section of houses with narrow streets among them was discovered, and not far away two

[1] The Code of Hammurapi, Column III, lines 65, ff. Compare Rogers, *Cuneiform Parallels to the Old Testament*, p. 401.

thousand five hundred tablets were recovered, five hundred in excellent preservation, and all of the conventional business or contract character.

At the end of May the excavator and his men were driven away by the heat and the fierce storms of flying sand and dust, and the hot summer was passed in Baghdad. On September 19, 1904, the work was resumed, but in a short time the Turkish authorities ordered the excavations to stop, and shortly afterward Dr. Banks resigned and left the American engineer, V. S. Persons, who had been sent out to join him, to resume the work. His work, promising though it seemed, was stopped by sudden illness, and he was obliged to leave for Baghdad to save his life. The work ceased then, nor has it been resumed, and how much more of ancient Adab the ruins of Bismya inclose remains to be learned in some happier day.[1]

Alone among the greatest of the modern nations Germany had done very little in the field of exploration while other peoples had been so busy. German scholarship had made the highest contributions to decipherment and to the scientific treatment of texts unearthed by the patient explorers sent out by others. It were strange if Germany should not also seek to find

[1] For the fuller account of this expedition see the bright and cleverly written book: *Bismya or the Lost City of Adab; a story of Adventure, of Exploration, and of Excavation among the ruins of the oldest of the Buried Cities of Babylonia*, by Edgar James Banks, Ph.D. New York, 1912.

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Dr. Robert Koldewey, director of the works of excavation of the German Orient Society, at Babylon.

new tablets as well as to read them. Professor Friedrich Delitzsch, long an exponent of the science of Assyriology and one of the most eminent scholars of modern times, urged the formation of the German Orient Society,[1] which was finally constituted early in 1898.

Even before the proposed society was organized a "commission for the archæological investigation of the lands of the Euphrates and Tigris" prepared to secure direct information concerning the various sites which seemed to promise the best results when excavated. To this end Professor Eduard Sachau, of the University of Berlin, accompanied by Dr. Robert Koldewey, departed for the East, October 23, 1897. They thoroughly explored Babylonia and Assyria,[2] and brought back abundant information for the use of the new society, which was now fairly started. To it scholars gave their aid, the German Emperor made a grant of funds, and in the end of the year an expedition was sent to the East with Dr. Koldewey as director and Dr. Bruno Meissner, of Halle, as Assyriologist. The latter, after very useful service, retired and was succeeded by Dr. E. Lindl, of Munich. In the spring of 1899 work was commenced in the great mound of El-Kasr, Babylon, beneath which were

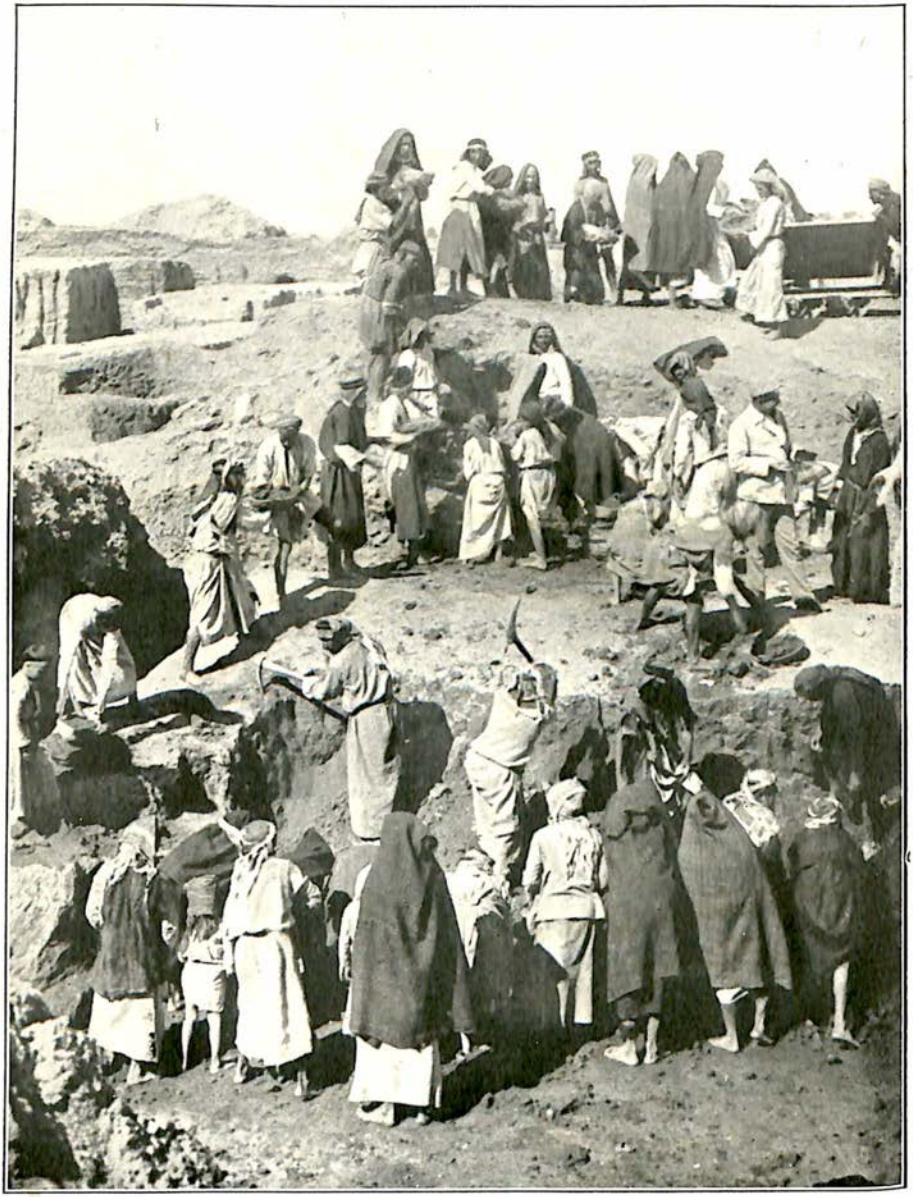
[1] See Friedrich Delitzsch, *Ex Oriente Lux!* Ein Wort zur Förderung der Deutschen Orient-Gesellschaft. Leipzig, 1898.

[2] *Am Euphrat und Tigris.* Reisenotizen aus dem winter 1897–1898, von Eduard Sachau, mit 5 Kartenskizzen und 32 Abbildungen. Leipzig, 1900, pp. 160.

the remains of the palace of Nebuchadrezzar. Success was had in a measurable degree from the very beginning in the discovery of a new Hittite inscription[1] and of many tablets of the neo-Babylonian period. It was, however, not the purpose of this expedition to search for tablets or for objects of art, as Rassam and many others had done. These must indeed always be of great interest, but a more scientific spirit of archæological research had now come, and it was the excavator's business to study the topography and so to ply the spade as to reveal the architectural character of the buildings which should be unearthed. Koldewey was provided with a light railway to remove the debris after its examination, and so to obviate the necessity of covering again what had been excavated as the work proceeded. Probably no former expedition was ever equipped in so scientific a manner.

He first laid bare the great building buried beneath the mass of Kasr, and with the help of his able architect, Walter Andrae, made a complete plan of the old palace which Nabopolassar had built and his son Nebuchadrezzar greatly extended and beautified. It is interesting to observe in passing that in early times this palace lay on the left bank of the river Eu-

[1] *Wissenschaftliche Veröffentlichungen der Deutschen Orient Gesellschaft.* 1 Heft. *Die Hettitische Inschrift gefunden in der Königsburg von Babylon am 22. August* 1899 *und veröffentlicht* von Dr. Rob. Koldewey. Vorwort von Prof. Dr. Friedrich Delitzsch. Leipzig, 1900.



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Excavations at Babylon, showing the removal of débris with picks, and the passing up of baskets to the car on the small railway by which it was transported to a point on the desert at some distance from the work. This plan of Dr. Koldewey obviated the repeated handling of material which hampered former workers.

The work was systematically organized. In each group one man tore down the débris, three filled the baskets, and sixteen carried them off. The master with the pick received five piastres, about twenty-five cents, per day, the basket fillers twenty cents, and the carriers fifteen.

phrates, which before the Græco-Roman period so altered its course as to place this palace on the right bank, dividing it from the new palace of Nebuchadrezzar and the temple of Esagila, which found themselves on the left bank. Close by the side of the old palace was discovered the small temple of Emach,[1] dedicated to the goddess Ninmach, and reposing safely within it lay a beautiful cylinder of Ashurbanipal, who had restored the edifice, and a brick of Nebuchadrezzar, who had rebuilt it. Twenty years earlier Rassam had excavated six chambers, but without being able to determine the nature of the structure. In one of the rooms were found about forty small tablets of Nebuchadrezzar and Evilmerodach, and upon them appears often the name Labashi, architect or master of building, who seems to have been in charge of the fabric at that period. Small though the temple is, it has deep historic interest, for it seems quite probable that it was within these very walls that Alexander made his offerings when death drew near.[2] Encouraged by these results the work proceeded without a break during even the great heat of the summer, and extending over from the mound of Kasr, began to search the great mound of Amran ibn Ali to see what might be concealed therein. From March to

[1] Robert Koldewey, *Die Tempel von Babylon und Borsippa*, p. 4, ff. Leipzig, 1911.

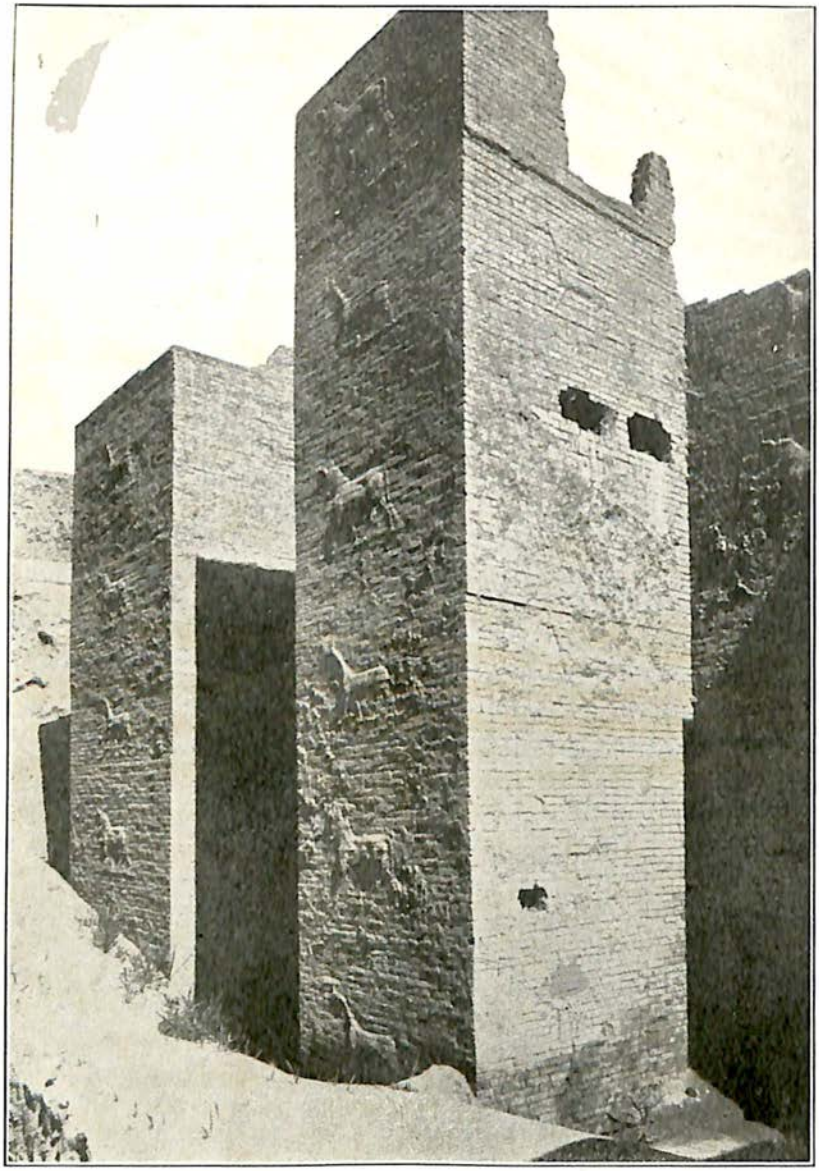
[2] Arrian, *Anabasis*, vii. 24, 25.

November, 1900, the diggers wrought amid the rubbish heaps, and then before them lay the evidence, clear beyond dispute, that these great walls were the inclosure of Babylon's greatest temple, Esagila, in which the chief god, Marduk, received his worshipers, the temple of which Nebuchadrezzar has had more to say than of any other. Amid its now ruined masses Koldewey found some of its treasures, fine seals of lapis lazuli, one of them bearing the record that it was presented to the temple by Esarhaddon, king of Assyria, and decorated by the imposing figure of the god Adad. Few inscriptions were found, but the new knowledge of temple and palace in Babylon was ample compensation.

On the east side of the great mound of Kasr, between the palace and the temple E-mach, were found the remains of the great procession street of Aibur-shabu[1], and numerous sandstone paving stones of Nebuchadrezzar discovered, each bearing an inscription of the king, saying, "I have paved the street of Babylon, with stone from the mountain, for the procession of the great lord Marduk."

Moving yet further south, in September, 1901, the mound near the native village of Jumjuma, called by the Arabs Ishin aswad, that is, "black hill," was next attacked, and in three months' labor disclosed a temple in which were found

[1] Koldewey, R., *Die Pflastersteine von Aiburschabu in Babylon.* Leipzig, 1901.



The two eastern door posts of the Ishtar Gateway, Babylon. See also the next plate.

[From Robert Koldewey, *Das wieder erstehende Babylon*, Leipzig, 1913, by permission of Professor Delitzsch, of the Deutsche Orient Gesellschaft, and the J. C. Hinrichs'sche Buchhandlung.]

three barrel cylinders of Nabopolassar, which were read by Dr. F. H. Weissbach, who was now the Assyriologist of the expedition.[1] From these it was clear that the temple was dedicated to Ninib, and that it bore the name Epatutila. The same mound yielded a most interesting hymn to Marduk in the form of a litany,[2] which filled out completely the gaps in a badly broken duplicate long reposing in the British Museum; and also two little fragments which yielded the name Sin-magir, a king of Isin, previously unknown. So do literature and history profit each in turn as the topography of Babylon is brought to the light of a modern day.

With the beginning of the year 1902 the German Orient Society was carrying on excavations in five different places, and now the discoveries flowed on so swiftly that it is increasingly difficult to give a consistent and orderly picture of them.

As the excavations by the mound of Kasr were continued on the eastern side there rose gradually out of the ruins the form of a great double gateway dedicated to the goddess Ishtar, and spanning the procession street in its progress

[1] *Mittcilungen der Deutschen Orient Gesellschaft*, No. 9, p. 8 (Koldewey), No. 10, pp. 11, 12 (Koldewey), also *ibid.*, p. 13, ff., by Weissbach. Compare for full text and translation Weissbach, *Babylonische Miscellen*, p. 20, Leipzig, 1903; and Koldewey, *Die Tempel von Babylon und Borsippa*, p. 30, and plates opposite, also Anmerkung 5 at the end of the book.

[2] *Mitteilungen der Deutschen Orient Gesellschaft*, No. 9, p. 5 (Koldewey), and p. 17 (Weissbach and Delitzsch). Published in full, Weissbach, *Babylonische Miscellen*, p. 36, f.

northward, just west of the temple E-mach. On this gate were discovered the most beautiful enamelled bricks depicting in brilliant colors and in bas-reliefs figures of dragons and lions. Here was the evidence that this art of brick enamel had antedated by centuries the skilled workmanship of the Persians, who must have been borrowers, and not inventors, of this beautiful craft. On this one great doorway were found no less than one hundred and thirty of these figures, most of them complete and in perfect preservation.[1]

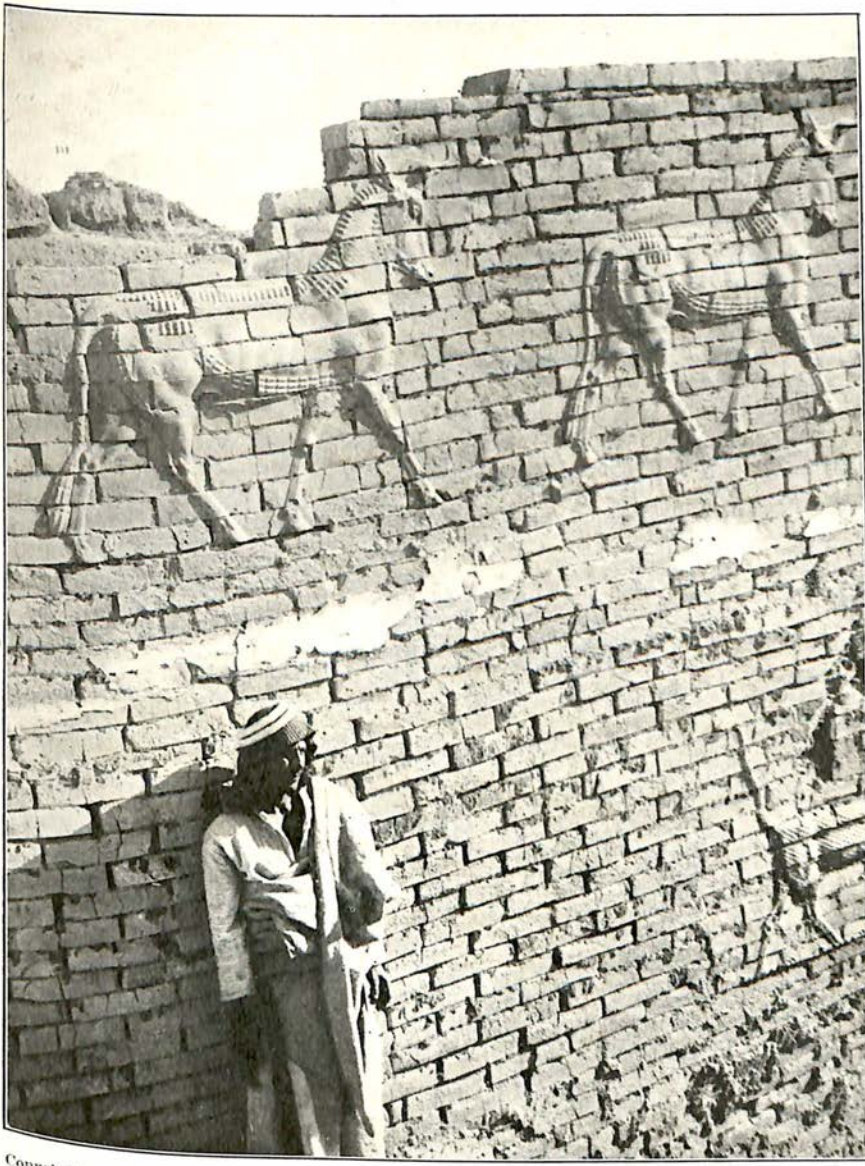
During this year the excavations were visited by Professor Friedrich Delitzsch, of Berlin, a director of the society, professor of Assyriology in Berlin, curator of the Western Asia collections in the Royal Museum in Berlin, and for many years the personal teacher of more Assyriologists[2] than any other professor of the subject in the world. He had left Berlin on the 18th of March and traveled by way of Aleppo (April 8), Urfa (April 14), Diarbekr (April 20), Mosul (April 27), and Kalah Shirgat (May 1). There he saw the site of the great excavations in the mounds which cover Asshur, the oldest capital city of Assyria, which were to begin in the next year

[1] For a summary account see Robert Koldewey, *Das Istartor in Babylon, Mitteilungen der Deutschen Orient Gesellschaft*, No. 19, Nov. 1903, p. 7, f.

[2] Among the personal pupils of Friedrich Delitzsch are Professors Heinrich Zimmern in Leipzig, Peter Jensen in Marburg, David Gordon Lyon in Cambridge, Robert Francis Harper in Chicago, Carl Bezold in Heidelberg, Paul Haupt in Baltimore, Franz H. Weissbach in Leipzig, and Robert W. Rogers in Madison.

The Bull of the Ishtar Gateway.

The body of the animal is a deep rich yellow, the raised hairy portions blue, eye black, horn and hoofs light green, while the background is blue. All these colors are enamel on baked brick surface, and the richness of color, the evenness of its disposition, when one considers that every brick must have been separately baked, and the beauty of the whole effect must fill any beholder with wonder.



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under the devoted, skillful, and laborious care of the architect, Walter Andrae. From Assyria Delitzsch made his way to Baghdad and thence to Babylon, where he spent more than a month, and then visited Ur of the Chaldees, Abu Habba, Birs (Borsippa), and in the very end of August passed through the Persian Gulf at a temperature of 120° to 128° Fahrenheit and returned home by way of Bombay and Marseilles.[1] A visit like this, apart altogether from its results in the scientific help given to the workers on the field, was sure to be of immense value in quickening interest in the homeland and so in the securing of material help for the further conduct of excavations.

In this year also began excavations in the mound of Fara, which shortly yielded some thirty tablets of unusual size, and then, in a house that had apparently been destroyed by fire, nearly two hundred and fifty tablets in ancient style were turned up by the spade. It would later appear that these sorry ruins, in which no great structural remains were found, were none other than the dour relics of the ancient Babylonian city Shuruppak, or Shurippak, the city of Utnapishtim, hero of the Babylonian Deluge story, and that the mound of Abu Hatab,[2] a little farther north, where also trial

[1] See the vivid account of his impressions in Friedrich Delitzsch, *Im Lande des Einstigen Paradieses*. Stuttgart, 1903.

[2] W. Andrae, *Ausgrabungen in Fara und Abu Hatab*, in *Mitteilungen der Deutschen Orient Gesellschaft*, No. 17, August, 1903, p. 4, ff.

trenches were dug by the same expedition, was the ancient Babylonian city of Kisura.

When this rather unrewarding experiment ceased, and a firman had been secured for excavations in the north, Koldewey, on September 18, 1903, began to excavate at Kalah Shergat, where he found in the very first opened trenches tablets of Shalmaneser I (1320 B. C.) and Ashur-anazirpal III (885–859 B. C.), which seemed to awaken the hope that the spades had struck into the remains of a royal palace. A few days later two beautiful alabaster vases, broken, yet easily restored, the one bearing the name of Esarhaddon (681–668 B. C.), the other a three-line inscription of the same king, recording that it had been filled with oil and was brought out of the palace of Abdimilkut, king of Sidon. What an interesting relic of peaceful industry in its contents of oil, and on the other hand in its external record of war on the outside. But these dates seemed but those of yesteryear, when he found two little stone inscriptions of Irishum, on one of which he calls himself the builder of the temple of Adad. Here then was a reach of historical record for this one temple of more than thirteen centuries. The ruins of a temple with such a history may well be worth the explorer's best devotion.

On November 10, 1903, Koldewey returned to Babylon, and Andrae, who had been in Germany for a time, but had now returned, was left to

Friedrich Delitzsch.

Professor of Semitic Languages in the University of Berlin; Director of the Department of Antiquities of Western Asia in the Royal Museums, Berlin. Born at Erlangen, September 3, 1850, son of the distinguished Hebraist, Franz Delitzsch. Extraordinary Professor in Leipzig 1877–1893. Ordinary Professor in Breslau 1893–1899, and in Berlin since 1899. Eminent Assyriologist; distinguished teacher; one of the founders of the German Orient Society.

Herrn Prof. Dr. Rogee in treuer Freundschaft
Friedrich Schlitzke
Juli 1904.

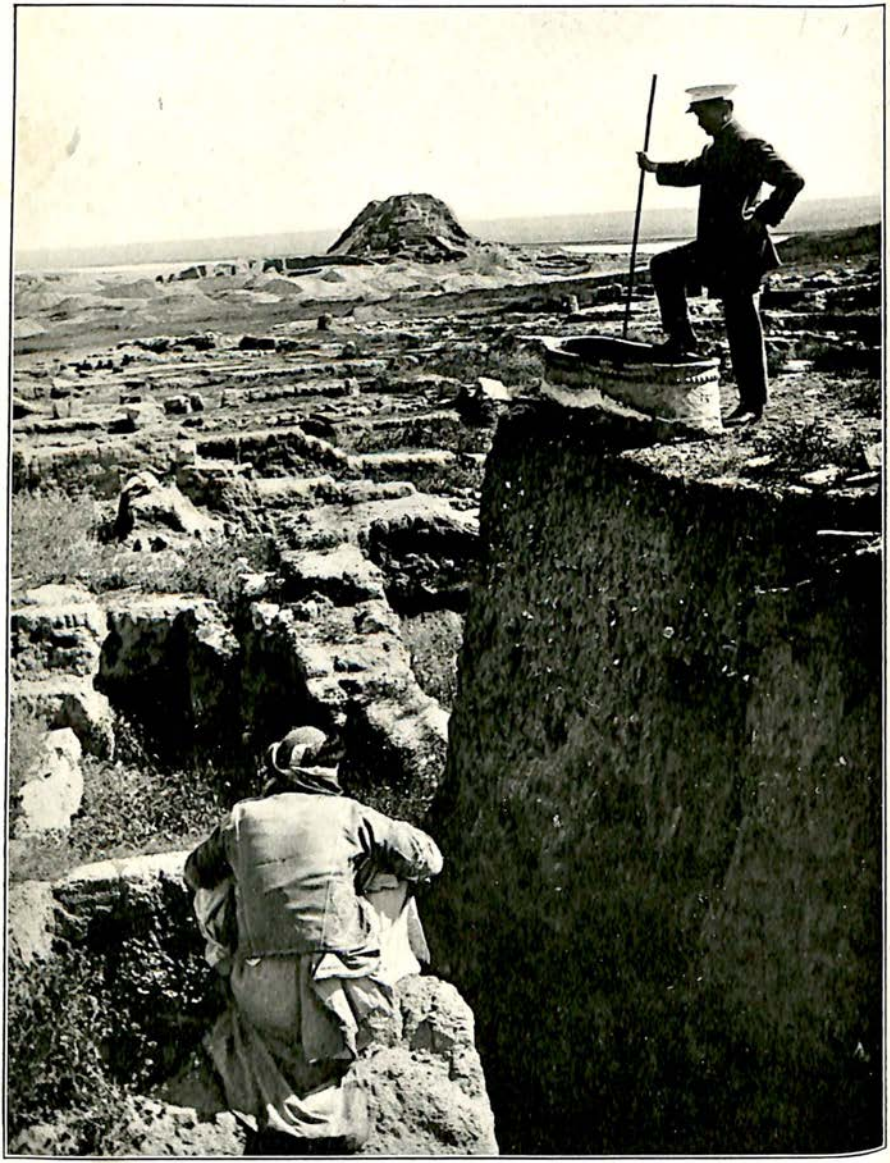
carry on the excavations in Asshur. From then until this present day have these excavations continued with a patience and persistence beyond all praise, and with characteristic German thoroughness and scientific precision. To name all that was found in this long series of years would be to write an imposing catalogue, but not an easily intelligible history. The greater discoveries only can here be set forth and an attempt made to relate them to one another.

In the northern part of the great mound, stretching from east to west, were found a series of great buildings. There were first the remains of a palace of Shalmaneser I (circa 1300 B. C.), and just north of it the rather poor remains of the temple of Ashur, then east of these two a Zikurrat, and then the palace of Ashurnazirpal III (884–859 B. C.), with an interesting inscription of the king,[1] yet further to the west stood the great temple dedicated to the gods Anu and Adad, and beyond that again the new palace of Tukulti-Ninib I (about 1289 B. C.). In the long course of the years Andrae and his helpers have dug out the major part of the temple, and have found within its great spaces inscriptions enough to show the broad lines of its history. It was begun by Ashurrishishi (circa 1150 B. C.) and finished by Tiglathpileser

[1] *Mitteilungen der Deutschen Orient Gesellschaft*, No. 21, März, 1904, p. 11. The inscription published in Messerschmidt-Delitzsch, *Keilschrifttexte aus Assur I*, No. 25, Leipzig, 1911.

I (circa 1120 B. C.), his son. The brief inscriptions of the former were found written in an archaic cuneiform script, and, scattered in many places, were broken pieces of a large prism of the latter. Somewhere in these same ruins Layard and Rassam had found three such prisms, which had already gone to the British Museum, and the fourth, containing a duplicate account of the king's campaigns and also his record of the building of this temple, is now recovered by Andrae.[1] From this prism it would appear that the temple had been begun by Shamshi-Adad I (circa 2000 B. C.), and had then when in bad repair been razed by Ashurdan, grandfather of Tiglathpileser, partly rebuilt by Ashurrishishi, whom, however, Tiglathpileser does not mention as having built at all. Then two centuries and a half passed by and the temple which Tiglathpileser had erected was fallen into ruins, and Shalmaneser III (859–825) rebuilt it and left within the simple records of his work, which

[1] "We [Layard and Rassam] were also fortunate enough to discover buried in the solid sun-dried brick masonry about ten feet under ground, the annals of Tiglathpileser I, recorded on the terracotta cylinders, all bearing almost the same text. The first was discovered by Sir Henry Layard at the beginning of 1852, the second, exactly like it, I dug out in the following year during my own mission; and the third I also discovered at the end of the same year, on my second expedition to that ruin. . . . These three cylinders were found placed about thirty feet apart, at three of the corners of an almost perfectly square platform. They were buried in solid masonry on the same level, and so I fully expected that we should find the fourth in the other corner; but though I dug away and examined the whole structure, I could find no trace of another cylinder." Rassam, *Asshur and the Land of Nimrod*, p. 20. It was this fourth which Andrae found more than fifty years later. Andrae, *Der Anu-Adad Tempel in Assur*, p. 32, ff. Leipzig, 1909.



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View over the ruins of Asshur, looking northeast. On the right a member of the staff of the German Orient Society.

have also yielded themselves up to Andrae's search.[1] As he went on with his excavations the whole complex of the temple became clearer in its outlines from month to month. It had two zikurats, of which that on the north may, as Andrae supposes, have been dedicated to Anu, and that on the south to Adad. Between these lay two rooms, doubtless set apart for the worship of the gods, and in front of these yet two other rooms, which opened into the great temple court, in the southern corner of which was a well more than ninety-seven feet deep and five and a half feet in diameter. Around this court were a number of rooms, of rather uncertain use, and in front the main entrance of the temple.

Some time after the restorations of Shalmaneser III the temple had again come into decay, and then upon its base some profane structure had been erected, of which some remains are still discernible. It seems to have perished by fire, and the great court of the temple was repaved with bricks brought from the palace floors of Sargon and still bearing his name and sign. This must have been done in very late times and perhaps in the neo-Babylonian period.

West of the great temple Andrae found a number of private houses belonging to the late Assyrian period and very interesting as revealing something of the housing of the period. Every

[1] Andrae, *op. cit.*, p. 40, ff.

one had its paved court in front, with living rooms behind. The floor of these rooms was beaten soil, the walls were very thin, in most instances consisting of one stone only in thickness, and were plastered above and covered with asphalt at the bottom. The doors swung on hinges, and every house had its proper sewer connections. Some of them had graves beneath which seem to have been used as burial places while the house was inhabited above.[1]

Outside of the city wall and beyond the northwest corner were found remains of a large building, which had stood amid extensive gardens, watered artificially by small canals still traceable amid the accumulated rubbish of ages. The building was quite different from the usual Assyrian style and stood upon sandstone foundation courses, and we should have been much puzzled to know what it might have been if there had not, most fortunately, been found small inscriptions of Sennacherib within it which told us that this was a New Year's-Festival House,[2] dedicated to the god Ashur, where in the New Years, in our month of April, the great celebrations were wont to be held with processions of gods and jubilations of men.

South of the palace of Tukulti-Ninib and of the Anu-Adad temple the ground yielded the

[1] For these houses see the statements of Andrae in *Mitteilungen der Deutschen Orient Gesellschaft*, No. 31. Mai, 1906, p. 36, ff.

[2] Andrae, in *Mitteilungen der Deutschen Orient Gesellschaft*, No. 33, June, 1907, pp. 14, 15, 24–32 and Delitzsch, *ibid.*, pp. 34–37.

The temple of Anu and Adad of Shalmaneser III in Asshur, according to the reconstruction of Walter Andrae, *Der Anu-Adad Tempel in Assur* (Leipzig, 1909).

[Reproduced from Helmolt's *Weltgeschichte* II, p. 80.]

Two Stelæ found by Andrae at Asshur. The one on the left contains the legend:

Stela of
Ashur-resh-ishi
King of Assyria
Son of Ashur-rabi.

This belonged, therefore, to Ashur-resh-ishi II. Its height is 1.70 meters, breadth 0.58 meters. The one on the right contains the legend:

Stela of
Tiglathpileser
King of Assyria, son of Ashur-resh-ishi
King of Assyria.

This is Tiglathpileser III, son of the former king. Its height is 2 meters, breadth .70 meter.

[Reproduced from Walter Andrae, *Die Stelenreihen in Assur*. Leipzig, 1913.]

plan of a temple of Nebo, with numerous pavement bricks, each inscribed with the name of the king, Sinsharishkun, the last king of Assyria.[1] This temple was especially interesting because of its grouping together of two sets of temple rooms of apparently equal importance.

In 1909 the Asshur expedition, while driving trenches to seek for the remains of large structures, came upon a long line of Assyrian *stelæ*. The first discovered bore the name of Shalmaneser III with his relationship to father and grandfather, then came inscriptions in like form of Ashurrishishi II and Tiglathpileser III, then came one of Tukulti-Ninib I, and then, most interesting of all, Sammuramat (Semiramis),[2] wife of Shamshi-Adad and mother of Adadnirari, and after these one of Ashurnazirpal III. No less than fifty-five of these large *stelæ*, varying from six to eleven feet in height, and made of sandstone, basalt, or alabaster, were recovered.

During the year 1910 the Ashur temple, on the northeastern corner of the city and near the Tigris, was excavated completely, revealing its entire ground plan, and securing records enough to give a general view of its history extending over many centuries. Small and rather doubt-

[1] J. Jordan, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 38, December, 1908, p. 26, f., and 43–49.

[2] On these Stelenreihen see the preliminary reports by Andrae in *Mitteilungen der Deutschen Orient Gesellschaft*, No. 42, December, 1909, and on the Sammuramat compare Lehmann-Haupt, *Die historische Semiramis und ihre Zeit*. Tübingen, 1910. For the complete edition of all the stele see Andrae, *Die Stelenreihen in Assur*. Leipzig, 1913.

ful remains of the time of Ushpia, more abundant foundation walls of Irishum (circa 2040 B. C.), and then the newer foundations of Shamshi-Adad I, whose ground plan was considered by his successors to be so well laid that none of them was bold enough to change it. During the reign of Shalmaneser I the temple had been burnt down, and was then re-erected by him with his palace so closely adjoining that the remains of the two buildings may scarcely be distinguished at the angle of their junction. At one of the doors were found enamelled bricks of Tiglath-pileser II (about 1050 B. C.), and of Sargon II (722–705 B. C.) who had performed a similar office for another, and had repaved a court, while his son Sennacherib had extended the temple on its eastern corner. Here then were the remains of a temple on which skillful and devout hands had been building for more than thirteen centuries. No former excavator had ever seen so many centuries unroll before him in any single temple. Before this great temple was an open square or plaza, and on the opposite side, facing its greater neighbor, stood a smaller temple dedicated to Sin and Shamash, and near it lay a clay record of its erection by Ashirnirari I, while not far away were found hundreds of unbaked tablets of the eleventh and twelfth centuries B. C.[1] More surprising than either of these was the

[1] *Mitteilungen der Deutschen Orient Gesellschaft*, No. 51, p. 47, and No. 54, p. 1.

unearthing of the oldest Ishtar temple, whose foundation must have been laid in the third millennium before Christ. Within it were found Sumerian statues, and other remains of their work sufficient to demonstrate that Asshur must have been inhabited in the Sumerian period. The plastic remains closely resemble those found by de Sarzec at Tello.

In the same temple was found a magnificent inscription of Tukulti-Ninib I, who restored the temple in his day, building somewhat south of the older foundation, and referred to a previous restoration made by Ilushuma, seven hundred and twenty years earlier. This important monument barely missed discovery at the hands of Rassam, one of whose tunnels passed within eight inches of it.[1] Such are the fortunes of archæological exploration!

Scarcely had Andrae and his skillful helpers finished these works when they came upon another and perhaps more startling discovery. For the spades had struck into a series of tombs, whose general character marked them as probably royal and not private. Andrae's acumen speedily identified the most westerly one as the tomb which once had contained the remains of Shamshi-Adad V, husband of Semiramis, while another was soon determined to be that of Ashurnazirpal III, a portion of whose great basalt sarcophagus was still in place, while not

[1] *Mitteilungen*, No. 54, p. 27.

far away the massive sarcophagus of Ashur-belkala remained almost in perfect condition.

The discovery of these royal tombs appeals most strongly to the imagination. Before this Assyriology had seemed so poor in comparison with Egyptology, which has from the beginning been able to point to its long series of royal tombs, nay, even to the mummied remains of the greatest of Egyptian kings. There is no probability that Assyrian discoveries will ever be able to match these, but the reproach that neither Assyria or Babylonia had even one royal tomb to show has been taken away.

With this spectacular discovery excavation at Asshur ceased, and on April 20, 1914, Andrae reported that the work was concluded. No such thorough excavation of any site in that valley had ever before been made. Andrae had indeed erected an imperishable monument to his patience, skill, and industry.

On October 15, 1913, Dr. W. Bachmann began excavations at Tulul-Akir, which was felt to belong to the same field as Asshur. Within the first two months he had the good fortune to find an alabaster tablet of Tukulti-Ninib I, which had been prepared for the temple of Ashur in the city of Kar-Tukulti-Ninib. This proved that the mound of Tulul-Akir covered the ancient and rather artificial city which the king had built. It was a city built on the opposite bank of the river from Asshur, and must have been

inhabited but a short time and by comparatively few people, for its remains are clean, and not covered with the debris of many people. The city did not survive its builder.

The most important building recovered was the extensive temple of Ashur, with its great Zikurrat, a lonely example of how lavish in human labor were these kings, who could so build even in places little likely to endure, and less likely ever to become the abiding places of large populations. The royal palace also gave mute evidence of the same moving fact—the waste of human endeavor.

The excavations ceased in January, 1914, having revealed little else than these memorials of a shallow and unenduring magnificence.[1]

During all the years of this work at Kalah Shergat, the mound of Ashur, the work on the ruins of Babylon went steadily forward, under Koldewey and his assistants. It was harder than at Ashur in this respect that the yield of tablets or of works of art was far less, and the excavator had therefore far less encouragement in his exhausting labor. The most important results during this time were achieved through the long continued excavation of that part of the ruins of Babylon called by the natives Merkes. On the top of this mound were found remains of the Greek period, and beneath these

[1] See for the record of Bachmann's work, *Mitteilungen der D. O. G.*, No. 53, pp. 41, ff.

Parthian and then neo-Babylonian and old Babylonian objects. Here was located the chief residential part of the city in the period of Nebuchadrezzar,[1] and in the houses were found large numbers of tablets, many unbaked, but very useful for the dates upon them, and also beautiful seal cylinders, together with many other small objects of house utility. In this same mound was found also the smallest temple yet discovered in Babylon, having a ground plan of only about one hundred and seven by one hundred and twenty-five feet.[2] It was dedicated to the goddess Ishtar of Agade and built into its wall was discovered a fine cylinder of Nabonidus, who had erected or, at least, further rebuilt an older temple.[3]

In November, 1912, the German Orient Society began excavations at Warka, Doctors Jordan and Preusser being deputed for the purpose. The site is of great antiquity as a city of residence, being known in Sumerian times by the name Unug or Unuga (settlement) and called by the Babylonians Uruk, in later days Arak, and called by the Hebrews Erech, who also rightly recognized it as one of the earliest cities of the country.[4] The ruins are buried beneath a very

[1] Koldewey, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 40 (Mai, 1909), p. 4, f.

[2] Reuter, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 45 (Juni, 1911), p. 26, f.

[3] Koldewey, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 47 (Dezember, 1911), p. 22, f.

[4] See the reports of this new work by Julius Jordan, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 51 (April, 1913), pp. 47, ff.

extensive mound, almost two thirds the size of Nineveh, nearly one half the size of Babylon,[1] and fourteen times the size of Asshur.[2] When one remembers how long a time and how much labor has been spent upon Asshur, the magnitude of this new undertaking becomes manifest. The mound has never been excavated, and, save for small robberies by the natives, has been scarcely touched since Loftus made his small trial trenches in it.[3] The vast mound presents three easily distinguishable masses. The first rises forty feet above the general level of the mound, covering the Zikurrat of the city temple, and bearing among the natives the name *Buwârîë*, or Buwêriye.[4] It is to be expected that the temple remains will be found in the same portion of the mound. West of this is another large mass, called by the Arabs *Wuswas*, in which should be found some palace, and on the southwest another called by the Germans the South-west-Burg.

In the very first measuring of the mound there were found seals and inscriptions of Ur-Engur (circa 2400 B. C.), for the temple of Ishtar, the goddess whose Sumerian name was Ennin, and also a stamp of Karaindash (circa

[1] Babylon covers 1,000 hectares, Nineveh 750, and Warka 450. So Delitzsch, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 47 (Dezember, 1911), p. 47.

[2] Asshur only covers 53 hectares, so Delitzsch, *ibid.*

[3] See above, p. 201.

[4] The name is an Arabic corruption of the Persian *Bûriya*, which signifies a mat made of split reeds, and is used here to describe the mats which had been used in the construction of the zikurrat between the courses of bricks.

1430 B. C.) for the temple of E-ana. It seemed probable, therefore, that beneath Buwêriye would be found the temple of Eana, dedicated to Anu and his daughter Ishtar.

Excavations were first begun at Wuswas, and shortly after trenches were also dug in the Buwêriye, in the search for remains of Eana. In the former it was soon evident that during the Seleucid period this building had been in use, and that trenches must be driven deeper to reach the Babylonian work beneath. This task provided many difficulties and gave little satisfying results. It was found impossible to distinguish the date of much of the construction, as the same types of material and of workmanship recurred constantly.

As the large brick building was gradually uncovered it became ever more plain that it bore a striking resemblance to the work of the neo-Babylonian period.

The various trials made by trenching were disappointing. No inscriptions of value were found, and as the weather conditions were unfavorable, and the supply of labor much interrupted, the work ceased in May, 1913, and the weary explorers made their way in ten days' hard travel to Baghdad.[1] The results are indeed not satisfying, but in some happier day the Deutsche Orient Gesellschaft may be able to

[1] For brief accounts of these excavations at Warka see *Mitteilungen der Deutschen Orient Gesellschaft*, No. 51, pp. 47–76, and No. 53, pp. 9–17.

resume work on a larger scale, and with better result. Meanwhile there are some reasons for fearing that the mounds have been plundered by natives, and that objects of interest have been secured through their reckless and unscientific methods. This is indeed deplorable, but no way of preventing it seems thus far secured.

In 1888 there was made in Egypt a most surprising discovery of letters and dispatches written for the most part in the Babylonian script and language. A peasant woman, living in the wretched little mud village of Tell-el-Amarna,[1] on the Nile, about one hundred and eighty miles south of Memphis, was searching for antiquities among the sand and stones by the mountain side some distance back from the river. Little did she know that beneath this rubbish lay all that remained of the temple and palace of the great heretic king of Egypt, Amenophis IV, or, as he called himself, Akh-en-Aten. Her concern was only to find some bits of *anteeka*, which might be sold to those strange people from Europe and

[1] There is a dispute as to whether the name of the place should be Tell-el-Amarna or simply El-Amarna. Winckler has adopted the latter on the basis of a private communication from Professor Maspero, who asserts that El-Amarna is alone heard from the lips of the natives on the spot. To this view also Steindorff is inclined, for he writes "Tell-el-'Amarna (or better, El-'Amarna)" (Baedeker's *Egypt*, Leipzig, 1898, p. 193). On the other hand, Petrie (*History of Egypt*, ii, p. 205), Budge (*The Tell-El-Amarna Tablets in the British Museum*, *passim*), and Sayce, all of whom know the place well, unite in reading Tell-el-Amarna. Professor Sayce says in a personal note to the writer: "There is no place called El-Amarna, which is the Egyptian name of a Bedawin tribe (El-Amarân). But there is a Tel el-Amarna and a Dêr el-Amarna, some miles to the south of the Tel."

America, who buy things simply because they are old. Out of the mound she took over three hundred pieces of inscribed tablets, some of them only $2\frac{1}{8}$ inches by $1\frac{1}{16}$ inches, while others are $8\frac{3}{4}$ inches by $4\frac{7}{8}$ inches and even larger. One hundred and sixty of these, many of them fragments, were acquired by Herr Theodore Graf, of Vienna, and were purchased from him by Herr J. Simon, of Berlin, and presented to the Royal Museum in the latter city. Eighty-two were bought for the trustees of the British Museum by Dr. E. A. Wallis Budge; sixty came into the possession of the Gizeh Museum in Cairo, and a few into private hands.

The documents thus restored to the world are to be reckoned with the most important of cuneiform discoveries. They consist of letters and dispatches which passed between Amenophis III and Amenophis IV on the one hand, and on the other various monarchs, princes, and governors of western Asia, among whom were Kadashman-Bel of Babylonia, Ashur-uballit of Assyria, Dushratta of Mitanni, Rib-Adda of Byblos, Abimilki of Tyre, Abdi-Kheba of Jerusalem, and many others. Their historical value is great, not only because of the chronological material deducible from them, but also because they give a noteworthy side light upon the entire social relations of the time.[1]

[1] On the Tel el-Amarna discoveries in general consult the valuable bibliography in *The Tell-el-Amarna Tablets in the British Museum with Autotype Facsimiles*, London, 1892, pp. lxxxvii, ff., and add to

During the winter of 1887–1888 the southern part of the great valley of the Euphrates was thoroughly explored for archæological purposes by Dr. E. A. Wallis Budge, deputed by the trustees of the British Museum to examine closely the work done by excavators before this date and report to them. His actual work of exploration began at Basra, and the first mound visited was Tello, where he had an opportunity of studying the work of de Sarzec. Thence he journeyed along the Shatt el Hai to Kût el-'Amâra, and thence by the Tigris to Baghdad. At Baghdad he made an investigation of the sale of antiquities and learned at first hand information likely to be valuable in future excavations, and in the purchases of tablets to enrich the Museum. Departing from the city of the Caliphs, he went to Babylon, visiting Hillah and all the mounds down to Birs Nimroûd, the site of Borsippa, and then returned to Baghdad to make a journey up the Diyala as far as Samarra. The report which he made to the trustees upon his return has not been published, but its value was so highly appreciated that it was decided to send Dr. Budge back to the east upon an expe-

that especially Winckler, *Der Thontafelfund von El-Amarna*, Berlin, 1889, seq., and also *Keilinschriftliche Bibliothek*, vol. v. A useful summary of the general historical results is given by Carl Niebuhr, *Die Amarna Zeit*. Leipzig, 1899. Third edition, revised and enlarged, Leipzig, 1913. The latest translation of all these tablets is in J. A. Knudtzon, *Die El-Amarna-Tafeln* (Vorderasiatische Bibliothek). Leipzig, 1907–1914. To this there is appended a very valuable body of notes, especially upon geographical and historical problems, by Otto Weber.

dition to the great mounds of Nineveh, from which the Museum had already received rich treasures.

In September, 1888, Dr. Budge traveled rapidly to Mosul by way of Birejik and Diarbekr to excavate at Kuyunjik. The trustees of the British Museum had already conducted successfully negotiations with M. Hamdy Bey in behalf of the expedition, and having furthered projects of his for his own museum at Constantinople, had secured from him an engagement to permit the export to the British Museum of any antiquities recovered by Dr. Budge, which seemed to belong to the collections in the British Museum already secured from this same mound by Layard, Rassam, and Smith. The arrangement was a most reasonable one for the advancement of knowledge, as the placing of whatever might be recovered in Constantinople would have prevented forever the re-joining of fragments, one part in London and the other in Constantinople, and so forbid the recovering of pieces of Assyrian literature.

When Dr. Budge reached the mound he found that the natives had planted a portion of it, and their crops must be bought before excavations could begin, and when this had been duly accomplished the new excavator found his work impeded by the masses of debris left by his predecessors, who had dug out buildings and heaped up rubbish by the sides of them. Having

moved away great masses of this material, Budge dug out of the northern end of the mound a city gate, and from its eastern border recovered a superb colossus. His main efforts were, however, given to the southwest corner of the mound, where the work was continued until the end of March and resulted in the finding of no less than three hundred and ten Assyrian texts, which were added to the collections of the British Museum,[1] representing historical, religious, and astrological material and belonging chiefly to the period of Sennacherib, Esarhaddon, and Ashurbanipal.

Besides this work at Kuyunjik, Budge carried on clandestinely some trial diggings between the mounds of Neby Yunus and Kuyunjik, and secured three large stelae similar to the one previously found at Nineveh and now in the British Museum. These three new ones were confiscated by the Turkish authorities, and have disappeared. A fine altar found by him at Khorsabad suffered a like fate.

He attempted to open some old trenches at Neby Yunus, where Rassam had purchased some houses in the name of the British Museum, intending to excavate beneath them, but the authorities refused permission.

After Budge had returned to England Nim-

[1] They are catalogued under BU. 89-4-26. See Bezold, *Catalogue of the Cuneiform Tablets in the Kouyunjik Collection of the British Museum*, iv, pp. 1917-1931. London, 1896.

roud Rassam, a nephew of Hormuzd Rassam, conducted excavations by his order until the month of July, and then beginning again after the coming of cold weather, carried on the work during the winter of 1889–1890.

In September, 1890, Budge crossed the desert to Ed-Deîr, on the Euphrates, and made his way up the river Chabur to Shadadi and Arban, at both of which he made trial trenches to determine whether they might be profitable to excavate. A short distance above Arban he was stopped by Arabs of the Shammar tribe and robbed of most of his possessions. Escaping from them, he reached Kairet Khutiniyeh, a thieves' settlement about the lake and on an island in it. They took pity on his helpless state, took him in, fed him three days, and put him safely on his way with a guide through the Sinjar mountains. To them he made presents of a Waltham watch and a compass out of the small store left him by the Shammar. Relieved rather than despoiled by these who bore the name and fame of thieves, he went on eastward only to fall into the hands of the Yezidis, the devil worshipers, who despoiled him again, leaving him, stripped of most of his possessions, to make his way by Tell Afar to Mosul, which he reached at last about eleven o'clock at night to find the city gates closed and be compelled to wait outside until morning.

After such troubles and vicissitudes he was

nevertheless ready at once to begin excavations at the northwest edge of Kuyunjik, with a force of natives growing daily in number until three hundred were employed. In the month of February he went down the Euphrates to Deir, in Babylonia, and learned that the Wali had had excavations going on in the mound for nine weeks, and was reported to have found a thousand tablets. Budge himself began excavations and met with only a modest reward in the recovery of inscriptions. Before leaving the neighborhood, however, he purchased for the British Museum a splendid store of three thousand tablets which had been secured by local diggers.

From Deir Budge returned to the work at Kuyunjik and gathered up the two hundred and forty tablets[1] which had come from the mound. After his departure for England the work was continued, according to his directions, by Nimroud Rassam for four months.

A caretaker was then appointed and paid by the trustees of the British Museum, who should watch the mound to prevent plundering, and to retain a claim upon it, for it was the purpose to continue Dr. Budge's work at some later time. In 1901 it was officially decided, before the resumption of excavations, to secure a report upon the site, and Dr. Leonard W. King, then assistant to Dr. Budge and now assistant keeper in the British Museum, was sent out to the

[1] These are listed in Bezold, *Catalogue iv*, pp. 1931–1949.

East with four months' leave of absence from museum duties. His instructions were to visit, not only Kuyunjik, but also the other sites in Syria, Assyria, and Babylonia, where the trustees had already made excavations and report upon them.

King left London at the beginning of September, 1901, and traveled rapidly by way of Marseilles and Constantinople to Beirut, where he visited and examined the Assyrian and Egyptian rock sculptures at the mouth of the Nahr-el-Kelb. From Beirut he went via Aleppo to Jerablus to examine the mounds which cover the site of Carchemish on the Euphrates. There excavations on a small scale had been conducted by Mr. Henderson, sometime British consul at Aleppo. King reported that further excavations in the mound would seem to promise great success, while the small amount of soil and débris above the Hittite sculptures, already revealed by Mr. Henderson's trenches, would make the work far from costly. King's judgment upon this has been amptly justified by the results since obtained by the skillful work of Dr. D. G. Hogarth upon this site.

After crossing the Euphrates at Birejik, King had intended to ride swiftly eastward by way of Urfa to Mardin, but had to turn northward in consequence of the disturbed condition of the Anazeh and Shammar Arabs, but finally made his way in the saddle to Mardin by way of

Diarbekr, and thence to Nisibin, which was reached October 12. There the Kaimmakam detained him for six days because the country was up, as the Easterners say, all the way to Mosul. On the 18th he escaped from his too careful warder, and in three days reached Mosul in safety by avoiding the usual caravan route.

He made a careful examination of the mounds at Kuyunjik, and while taking measurements in Sennacherib's palace part of the wall of earth, which marked the limit of excavation on the southwest side, fell and an examination of the mass of material disclosed fragments of tablets. This evidence, coupled with the recovery from time to time by the native watchman of other tablets, afforded sufficient proof that the virgin portions of the mound would be likely to yield further remains from the great Assyrian library of Ashurbanipal.

From Mosul King rode to Khorsabad, where Botta had met his first great discoveries, and then went on to photograph the rock sculptures and inscriptions at Bavian and Maltiyah. When this had been accomplished the monastery of Rabban Hormizd received him as a guest, and the monks, persuaded by his friendly attitude, showed to him their famous collection of Syriac manuscripts.

On October 28 King left Mosul for the voyage down the Tigris, stopping at Nimroud (Calah) and Kalah Shergat (Asshur), on both of which

he had been instructed to report. From Nimroud he rode with the sheikh of the village to Tell Balawat, where the bronze gates of Shalmaneser III and two inscribed tablets of Ashurnazirpal were said to have been found. From the small size of the mound, and from its contour, King formed the conclusion that it could never have covered the remains of a large building and that its identification with the city of Imgur-Bel should probably be given up. In this mound Rassam[1] had found portions of the gates of Shalmaneser III, but King conjectured they must have been originally found elsewhere and then hastily reburied there by the natives with the object of concealing the actual site from which they had been derived.

On the further journey down the Tigris numerous evidences appeared of raids by the Shammar, but only once was any effort made to hold up his kelek, which floated safely onward and reached Baghdad November 7, where he remained only one day before pushing on to Babylon to visit the remarkable excavations of the German Orient Society.[2] He there became the guest of the ever-hospitable Dr. Robert Koldewey, who gave him abundant opportunity to study the new and skilful methods of systematic excavation, inaugurated by himself, then in progress. King later applied the trenching

[1] See above, p. 285.
[2] See above, pp. 313ff.

method, which Koldewey had devised, in the oft-explored mound of Kuyunjik and with interesting results.

From Babylon King went on to Borsippa, and thence to Abu Habba and to Ctesiphon, on the two former of which sites he drew up reports. For the return northward he left Baghdad on November 20, and rode to Feluja, where he crossed the Euphrates and pushed on to Hit, Ana, and Der-ez-Zor. From Der he crossed the desert by rapid stages to Palmyra and Damascus, which was reached December 11th.

This would prove to have been a most profitable journey in many ways. It had given a distinguished Assyriologist an immediate acquaintance with the land from which his materials had come, and the clear and instructive report which he was able to present to the trustees of the British Museum after his return in January, 1902, led in that very year to a decision to make a further search in the great mound of Kuyunjik which had already enriched the British Museum.

On November 15, 1902, Dr. King set out again for the East, with a commission from the trustees to make a search for further remains of Ashurbanipal's now famous library. His first objective was Constantinople, to assist in the securing of a firman for excavations. There he remained until December 20 at work in the museum and diligently seeking an opportunity

to go forward with the plans of excavations, but meeting with the usual delays experienced by all his predecessors. When the firman was finally promised, though not actually placed in his hands, he went swiftly via Alexandretta and Aleppo to Mosul, where he had to wait until the beginning of March for the arrival of the belated permission to dig. The intervening time was given to an elaborate survey of the mound.

When the firman finally arrived a new set of difficulties had to be met. The whole top of the mound was owned by Salim Agha and was systematically tilled. No digging could be done until arrangements could be made with him. This was finally accomplished by renting from him successive portions of the mound, King engaging to refill the trenches and level off the surface so that it might again be used for agriculture. This naturally increased the difficulty of the work, and crowds of visitors on Fridays poured out from Mosul, gaping in open-mouthed wonder at the strange work, which added to the trouble of operating in a confined space. Soon some imaginative native started the oft-repeated rumor that the energetic westerner was searching for gold, which unhappily found some color in the actual discovery within the first fortnight of a small gold ring. But as no more appeared, the excitement gradually died out, and the curious ceased to make a Friday pilgrimage to the ruins.

King's first object was to clear thoroughly all the rooms in the southwest palace of Sennacherib in which Layard, Rassam, and Budge had found portions of Ashurbanipal's library—a work that yielded some further trophies of the great collection. As this work progressed King discovered that the wall which Layard had supposed to be the exterior façade of the palace on the river side was really the wall of an interior corridor, and that the bulls of which Layard had there found traces had really guarded the corridor, and not outside, doors. As the excavations were carried riverward a whole line of new rooms was unearthed, whose outer wall, sixty feet nearer the river, was pierced by a great doorway, before which, still in place, stood enormous limestone winged bulls. These had to be left where they were, visible from the river, silent witnesses of the small traffic which still floats down a historic stream in keleks, or skin rafts, almost exactly the same as the Assyrians had used. It may be devoutly hoped that vandals will not destroy these great monuments of antiquity to burn their fragments into lime.

As the diggers worked along the outside wall, King discovered a paved terrace which overlooked the river, where, doubtless, Sennacherib often walked with the dark, swift waters at his feet and the evening sun going down into the silences of the western desert. On this terrace were found a few more tablets, perhaps

scattered there on the destruction of the palace.[1]

From the river side the workmen were shifted over to the northeastern end of the palace, and its rooms were cleaned out, and then the work was carried on into the so-called north palace, built by Ashurbanipal. Here more tablets were secured of a different color from those occurring in the southwest palace and evidently made of a different clay. In this north palace were also discovered numerous unbaked tablets, chiefly business records, which surely did not belong to the library. Here there was evidence that the mound had been re-inhabited after the fall of Nineveh, a conclusion which found confirmation in the discovery of fine pavement slabs, with the carpet pattern, not in a pavement, but used by later hands for construction work in buildings.

Encouraged by these discoveries, King went on to explore the mound by a carefully arranged scheme of examination of parallel trenches, following a method devised originally by Dr. Robert Koldewey, and extensively employed by him at Babylon, where Dr. King had seen it and learned to apply it skilfully to other conditions. By this method the mound was penetrated below the level of the erections by the dynasty of the Sargonides to the level of the building operations of Ashurnazirpal, where a portion of

[1] King, *Kuyunjik Collection, Supplement*, p. xii, note 2.

Trench in the mound of Babil, forty-five feet deep, and hundreds of feet long. These trenches were dug by Dr. Koldewey at regular intervals to test the ground for buildings or for antiquities of any kind. The picture shows how a ramp was left on one side of the trench so that basket carriers could bring material from the bottom.

Copyright by Underwood & Underwood, N. Y.

a fine plaque[1] of this king was secured, and his elaborate system of drains discovered. More striking still in its deep reach into antiquity was the finding on a far lower level of "obsidian implements and beds of ashes, indicating the existence of a Neolithic settlement."[2]

On July 20 the work was suspended in order to give the men employed an opportunity to labor in the harvest. During the six weeks of intermission King went northward to Van and collated a number of the inscriptions which are still in situ, and made another visit to Bavian. Here he collated portions of the big Sennacherib inscriptions, and made a close study of the rock surface with a view to devising some method by which squeezes or copies of every line of the important texts might be made. The trials of the rocky surface convinced him that crowbars might be driven into crevices of the rock, and by ropes fastened to these he could suspend himself in a cradle before the texts and study them with a thoroughness never before attempted. Having determined upon this plan, he returned to the work at Kuyunjik, planning to have suitable crowbars made at Mosul and then return at a later opportunity.

In the latter part of September the trenching

[1] This interesting object now in the British Museum (Ki. 1904—10-9, 158), measures 5½ in. by 4¼ in. and is decorated with color on the upper surface. See *Catalogue of Cuneiform Tablets in the Kouyunjik Collection. Supplement* by L. W. King, p. 30.

[2] King, *History of Sumer and Akkad*, p. 343, note 3.

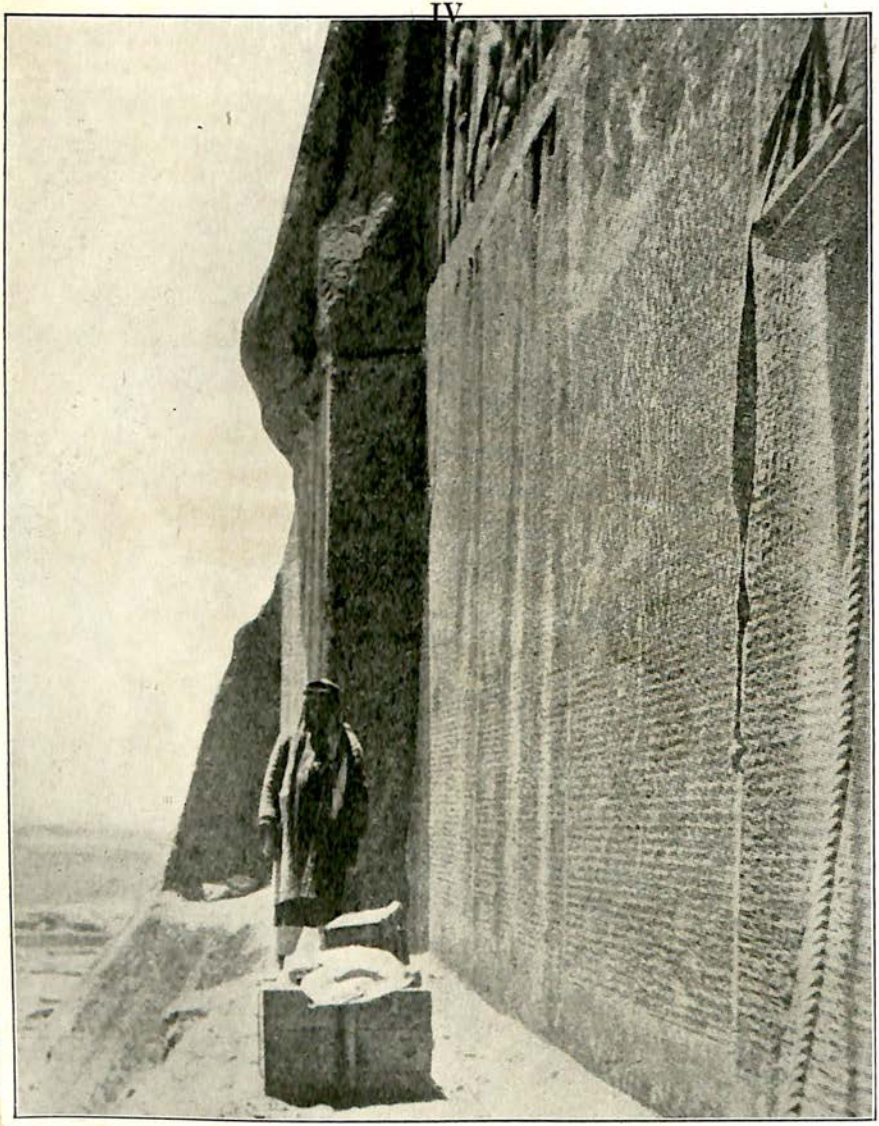
of the mound of Kuyunjik was renewed, and proved shortly that the so-called north palace of Ashurbanipal and the southwest palace of Sennacherib were not separated, as had previously been supposed, but that both probably formed portions of a vast complex built in stages by successive kings, and making in its final form one of the great palaces of antiquity.[1] While still excavating, King had the great good fortune to purchase the magnificent Tukulti-Ninib[2] slab, which had lately been found by natives, and now adorns an open case in the British Museum.

In March, 1904, Mr. R. C. Thompson was sent out by the trustees of the British Museum to assist in the excavations. Some time after his arrival King returned with his newly made crowbars and tackle to Bavian, using a rude cradle made from a mule girth, and had himself lowered by ropes over crowbars until he was suspended in front of the inscriptions. He then began to take squeezes, but the torrential spring rains twice washed them off before they could be dried. He then copied all the signs directly from the panel, swinging in a cradle in the rain. As soon as this was accomplished the weather cleared, as by one of the chances in an an-

[1] On October 27, 1903, the excavations were visited by André Jouannin, who has written a brief sketch of what he then saw. See *Une Visite aux ruines de Ninive* par André Jouannin, *Recueil de Travaux . . . égyptiennes et Assyriennes.* Vol. xxvi, pp. 175–178. Paris, 1904.

[2] King, *Records of the Reign of Tukulti-Ninib*, edited from a memorial tablet in the British Museum, London, 1904. See also vol. ii, p. 154.

IV



V

View of Columns I-IV of the Persian Text at Bisutun, from the ledge below the inscriptions:

I. Overhanging rock with Babylonian Version.

II. Projecting rock-face, with the Susian Version.

III. Gap in the ledge between the Susian and Persian Versions; in the distance are the village and caravanserai of Bisutun.

IV. Corner of the sculptured panel.

V. Cradle in position for examining the central portion of Col. IV of the Persian Text.

[Photographed by King and Thompson. Reproduced from *The Sculptures and Inscription of Darius the Great on the Rock of Behistun in Persia* (London, 1907), by permission of the Trustees of the British Museum.]

tiquary's life, and he was then able to make perfect squeezes, and so brought away a most complete apparatus for the future study of these difficult texts.

After King's return to Kuyunjik he and Thompson set out for Bisutun (Behistun), under instructions to make a complete collation of all the inscriptions which Sir Henry C. Rawlinson[1] had studied in the very beginnings of Assyriology. Here King employed the same method that had been used at Bavian. The inscriptions are on the rock surface five hundred feet above the plain. "By climbing up a ravine round the edge of the mountain he (King) succeeded in reaching a natural ledge about 200 feet above the inscription. Here iron crowbars were driven into crevices in the limestone, and ropes, made fast to them, were shaken with some difficulty down the uneven face of the rock, until their ends reached the ledge which is hewn in the surface below the inscription, and is rather less than 200 feet above the foot of the cliff. This lower ledge was reached by climbing from below. Cradles made of wood from packing cases and mule-girths were slung from the pendent ropes and were raised or lowered, according to the position of the text under examination, by natives stationed on the natural ledge above."[2]

[1] See above, p. 83. Compare above, p. 87ff.

[2] *The Sculptures and Inscription of Darius the Great on the Rock of Behistun in Persia.* (British Museum Publication, London, 1907, p. xxii.)

By these methods, and with tireless patience and admirable diligence, the whole inscription in its three languages was freshly collated and the labors of Rawlinson crowned at last by a definitive edition of the proud record of Darius.

From Bisutun the explorers returned to the excavations at Kuyunjik, whence King started homeward via Diarbekr. On this return journey he sought out the hidden places in the rocks of the Judi Dagh above Shakh, where Rassam[1] had seen some rock sculptures and inscriptions. A careful search revealed eight panels of Sennacherib, five of which yielded inscriptions describing the movements of the great king's army during the first half of the fifth campaign.[2] These were successfully copied under many difficulties, and are valuable for archæological and especially for geographical purposes in the elucidation of Sennacherib's military career.

On this journey a detour made possible another visit to one of the sources of the Tigris at Sebeneh-Su, where more copies and squeezes were made of the inscriptions.

During the long series of years that excavation had been carried on in the East by Europe and America but little interest in the subject was aroused in Turkey, in whose great empire all these finds were made. But during the lat-

[1] Rassam, *Asshur and the Land of Nimrod*, p. 389.

[2] They are now published, see King, *Some Unpublished Rock-Inscriptions of Sennacherib on the Judi Dagh, Proceedings of the Society of Biblical Archæology*. Feb., 1913, pp. 66–94, with plates.

ter part of the period there came a great revival of enthusiasm for antiquity in Turkey itself, due almost entirely to the wisdom, patience, and learning of one man. Trained in Europe, a man of fine natural taste and of great personal enthusiasm, Hamdy Bey was admirably fitted for the post of director-general of the Imperial Ottoman Museum. He has transformed it and all its arrangements and made certain a great future for it. Ably seconded by his brother, Halil Bey, he gave great and continued help to the Philadelphia expedition, and magnificently has his museum profited thereby. It remained only that this museum, the best situated in all the world to gain thereby, should itself undertake excavations. Hamdy Bey succeeded in interesting the sultan himself in the matter and inducing him to provide a sum of money from his private purse to undertake excavations at Abu-Habba, the site of ancient Sippar, during the months from January to April, 1894. The director of the expedition was the French Dominican, Father Scheil, a distinguished Assyriologist, who was accompanied by Bedry Bey, who had been Turkish commissioner to the Philadelphia expedition, and therefore knew by experience the best method of exploration. The expedition was completely successful, and in the short space of two months, at a cost of only three thousand francs, gathered a fine store of one thousand and twenty-two tablets and fragments, mostly letters and contracts

dated in the reign of Samsuiluna, the son and successor of Hammurapi, as well as many vases and other objects similar to those found by the expedition at Nippur.[1] Scheil was naturally supported by all government officials in the most loyal fashion, and his success is an interesting promise for the future. The Turkish government is able to control its own representatives in the neighborhood of the mounds, and if it is once thoroughly aroused to the interest and importance of excavating its untold buried treasures of art, science, and literature, scarcely any limits may be set to the great results that may be expected for our knowledge of ancient Babylonia.

Here rests for a time the story of expeditions to uncover the buried cities of Babylonia and Assyria. For a short time only in all probability, for the gain has been so large, the rewards so great, that new expeditions must ever seek an opportunity to labor in the same fields.

While great expeditions have their periods of labor and their periods of rest, one form of exploration goes on all the time in spite of many efforts to prevent it. The natives of the district have learned that antiquities may be sold to

[1] On this expedition and its results see Notes by Scheil in *Recueil de Travaux relatifs à la Philologie et à l'archéologie Egyptiennes et Assyriennes*, vol. xvi, and especially Extrait d'une lettre du P. Scheil, *ibid.*, p. 184, and M. Vincent Scheil, *Une Saison de Fouilles à Sippar*. Mémoires de l'Institut Français d'Archéologie Orientale du Caire. Cairo, 1902. An excellent, as well as most modest account of the expedition, with very full summary of the contents of the inscriptions. A model account of an expedition.

Europeans and Americans for gold. The traffic in them in Turkey is forbidden by law, and their export from the country is interdicted. But the native digs on surreptitiously and smuggles the results into the hands of merchants, who market them in Baghdad, London, and elsewhere. This practice brings into the possession of museums and so into the hands of scholars hundreds of tablets that otherwise might long remain hidden. Yet it is greatly to be deplored, for much is thus broken by careless and ignorant handling, and the source or origin, a point of great importance, is unknown or concealed from fear of the government. It is therefore on many accounts to be hoped that the Turkish government may ultimately succeed in preventing it, and may secure for its own rapidly growing museum more of the objects that are found by chance.

All that has been found yet is but a small part of that which doubtless lies buried beneath the mounds. Therein is an urgent call to men of wealth, to learned societies, and to governments to continue the work that has already been so marvelously successful. The gaps that yet remain in our knowledge of ancient Assyria and Babylonia may in large measure be easily filled up by the same methods that have given us our present acquaintance with that mighty past.

CHAPTER IX

THE SCRIPT AND THE LANGUAGES OF THE INSCRIPTIONS

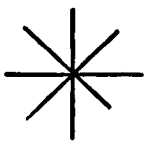
THE inscriptions on clay and stone which these excavations have restored to our eyes are all written in the character called cuneiform, or wedge-shaped. They are written for the greater part in the Sumerian, the Babylonian or Accadian, and in the Assyrian languages. As these languages passed through a long history of phonetic change, so the script had also its history of change and development. As the modern sources of any serious history of Babylonia and Assyria are the cuneiform writings it may serve the reader's sense of reality and vividness to give here a brief and simple account of this script, and a slight sketch of the peculiarities of the languages.

I. *The Cuneiform Character*

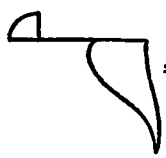
In the earliest Sumerian texts that have been preserved there is no trace of the cuneiform character. The script was *linear*, and its execution upon stone was rudely done, the lines being scratched and then engraved in the stone. In the beginning it was a picture writing, each sign being a rude picture of the object which it

represented. The following may serve as examples:

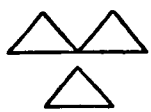
1 = FISH

2  = STAR
HEAVEN
GOD

3 = HEAD

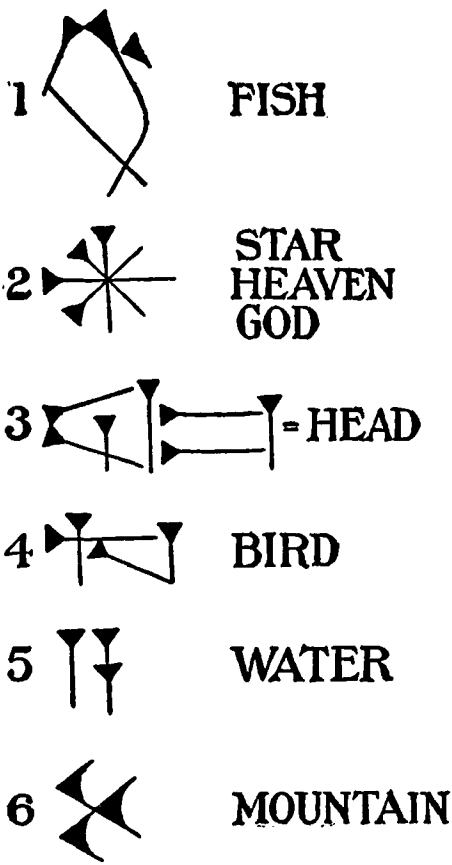
4  = BIRD

5 || OR (((OR ⟪ = WATER

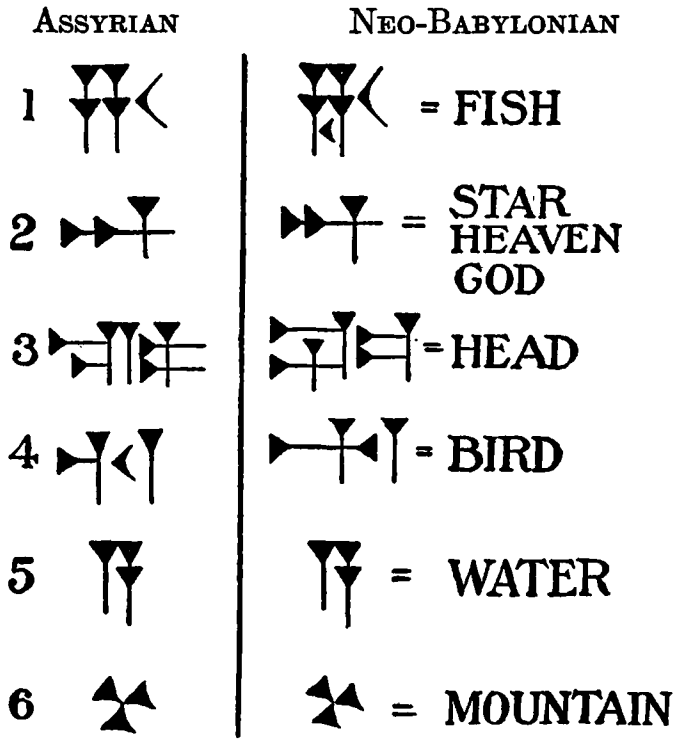
6  = MOUNTAIN

As the use of clay for a writing material increased the linear forms of the characters

were slowly transformed so that by the time of Gudea these same signs had become as follows:



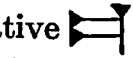
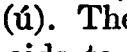
The process of conventionalizing, thus fully established, continued to develop, and in the Assyrian and Neo-Babylonian periods these same signs were thus written:



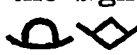
Of these pictographs that represented a simple object there seems never to have been a very great number, and with them alone it would not have been possible to express any complicated or any abstract ideas. But the genius of their creators was sufficient to develop from them a full set of abstract ideas; thus, the sign for an inclosed space ▭ was used to express the idea of "inclosing," "surrounding," and with a slight addition ⊞ meant "seize, hold." The sign for two || meant also "add." Then two simple signs were combined to express another

idea, so that the sign for "mouth" and the sign for water were combined to express "drink," and the signs for "water" and for "eye" produced a sign to signify "tears." This represented a great advance indeed in the power of expression, but a far greater step was needed, and was taken. The sign for "tears" acquired very naturally the meanings "weep, sigh, howl"; the sign for star or heaven acquired the meaning "high," and the sign for the rising sun was used to express "day, daybreak, light, clear, white." Up to this point the script was exclusively ideographic, each sign expressing an idea, and had the development proceeded no further the language could never have expressed itself in any adequate literature. But a device was early secured which opened a wide door, and gave the language expression through a sufficient though always rather cumbrous script. This device was the attaching of *syllabic* meanings derived primarily from the words which the ideogram expressed, thus: as the ideogram for "heaven," which was "an" or "ana" in the Sumerian language, was used for the syllable "an." There were now about four hundred ideograms, and to these the Sumerians by this process added about eighty syllabic signs, such as ba, bi, be, bu, ab, ib, ub, ma, mi, me, mu, am, im, um. By the combination of these it was then possible to write words for which there was no ideogram, such, for example, as nu-um-ma, "wolf," gu-za, "throne,"

but, still more important, it was now possible to write adjectives gu-la, "great," and verbs su-lu-ug, "to become clear," šú-uš-ri "to break," šú-tu-tu, "to take away." These all were expressed by simple syllables, but compound syllables, composed of consonant + vowel + consonant, such as *kam*, *lam*, *zag*, *dag*, were early formed, and these increased largely in number in the Assyrian period. The script was now rapidly becoming a more efficient tool for expression, but it was also becoming more complicated and therefore more difficult.

The next step was a most ingenious effort to help the reader. Some of the ideograms were used as determinatives, whose object was to show at once to the eye to what class a word belonged which was written syllabically. If, for example, the scribe had to write the name of a god he prefixed to it the ideogram for "god" used as a determinative. If he wrote the name of a country he placed after it the determinative (ki). If he wrote the name of any object made of wood he prefixed the determinative  (giš), before the names of plants  (ú). These determinatives were intended only as aids to the reader's eye, and were not pronounced, and were therefore often omitted.

As the script developed it most unhappily did not tend to become simpler, but rather more complex, and the very richness of its possibili-

ties led to the acquiring by one sign of several ideographic and at the same time of several syllabic values, thus the sign , which originally was written or  and signified the "rising sun," acquired the ideographic meanings *ûmu*, day, *immu*, daylight, *umšu*, daily, *abâbu*, bright, *ṭâbu*, good, *nûru*, light, *piṣit*, white, and many others more or less psychologically connected. Besides these it had also the syllabic values *ut*, *tu*, *tam*, *par*, *pir*, *laḫ*, *liḫ*, *ḫiš*, and still others. A script which admitted and permitted such strange extensions as this would seem, at first sight, to be reducing to absurdity, and proceeding to become unintelligible by reason of its very richness.

Yet by various little devices, and by the ever-present help of the context, the languages of great civilized peoples for more than three thousand years were successfully expressed by this complicated script, and, more wonderful still, were rendered intelligible again to this modern world, even after they had been forgotten for centuries. This final achievement had been aided by its very complexity, for the script was so difficult even when used by those who were applying it to a living tongue that they had made for their own use elaborate syllabaries, lists of ideograms and vocabularies, of which a sufficient portion has survived to our day to give us the clue to many words which might long have been puzzling or obscure.

When one thinks of the care bestowed upon the script, and of the long line of able men who used it, it seems a pity that such genius should lack the power to rise from a syllabary into an alphabet, and so cut at one blow the knot which tied their hands. But gifted though they were, it was not given to them to take the great step which lesser peoples were to achieve. Even while they still struggled with ideograms, determinatives, and simple and compound syllabic signs, Phœnicians and Hebrews close at hand, to say nothing of yet ruder folk like the Moabites, were writing inscriptions, and, in the case of the Hebrews, even books in prose and verse by means of a simple and most effective alphabet—whose construction was the greatest effort of ancient civilization.

II. The Sumerian Language

The earliest inscriptions are written wholly in a language which the Semitic inhabitants called by the name of the country, the language of Sumer. This language has afforded philologists one of the most difficult problems yet proposed in the history of the scientific study of human speech. Its problems are even yet but partially solved, and no grammar of it, in the fullest sense of the word, has yet been written or is likely soon to be written. But though this is true, the language may nevertheless be read with certainty as to its main drift and purpose, and with

reasonable probability in respect of its minuter details or nuances. For the use of the historical reader it seems worth while to set down here a few of the characteristics of the language that imagination may be assisted in forming a picture of the Sumerian civilization as it found expression in words so strange to our ears.

The sounds of the Sumerian language, so far as may, at present, be learned from its script were
(*a*) The vowels a, i, e, u.
(*b*) The consonants b, p, g, k, d, t, l, r, m, n, ǵ, z, s, š.
To these we assign the values to which our ears are accustomed, with the addition of ǵ, whose value we do not know, though it is clear that it must have been most closely approximate to the sound of g; and š, which equals "sh."

A. The Pronoun

má, má-e, me	I	*mene*	we
za, za-e, ze	thou		
e-ne	he	*e-ne-ne-ne*	they

The possessive pronouns were expressed by suffixes attached to words, quite after the manner usual in the Semitic languages, and were these:

Singular		Plural	
mu, ma mine		*mên, me* our	
zu, za thine		*zu-(e) nêne* your	
ni, na (for persons)	his	*nêne* (for persons)	their
bi, ba (for things)		*bi-(e) ne* (for things)	

Thus, for example, ê-mu, my house; ê-zu, thy house; sagga-zunene, your head.

The relative pronoun was little used, being replaced by a participal construction, but when necessary was commonly expressed by *lu* or *mu-lu*, which originally signified "man," "one."

B. Noun and Adjective

The noun did not commonly by its form distinguish between the masculine and feminine, though sometimes the suffix *sal* was used to distinguish, thus: *dumu*, "son"; *dumu-sal*, "daughter," though in some cases separate words were used, such as *ur*, "dog lion"; *nig*, "bitch lioness"; *am*, "wild ox"; *silam*, "wild cow."

The plural was formed by the mere repetition of the singular *da*, "side"; *da-da*, "sides"; *Kur*, "mountain"; *kur-kur*, "mountains."

There was little effort to distinguish cases, the nominative and accusative being usually left without special mark, and the genitive marked (a) by merely setting the words side by side, as *gê-bar* composed of *gê*, "night," and *bar*, "half," that is, half of night—midnight; or (b) by the suffixes *ka* or *ge*, for example, *gud-dingir-ene-ge*, "the oxen of the gods"; *Ningirsu dû En-lil-la-ka*, "Ningirsu the son of Enlil." The dative may be expressed by the addition of the formal suffix *ra*, for example, *lugala-ra*, "to the king." The adjective follows its noun and is often united with it by particles.

C. Particles

There are a few prepositions, originally nouns, but the wide use of prepositions in so many other languages is supplied in Sumerian by postpositions, the commonest of these being *da*, *ta*, *ra*, *šù*, and *dìm*, which are used as the following examples may serve to show: *An-da*, "with or by the side of Anu"; *an-ta*, "from heaven"; *ad-da-na-ra*, "to his father"; *dû-a-ni-šu*, "for the sake of his son"; *an-dìm*, "like the heaven."

D. The Adverb

Adverbs are formed by the model suffixes *šu*, usually shortened into *š*, or by *bi*, as ġúl-li-eš, "joyfully"; *šúr-bi*, "angrily."

E. The Numeral

1, *aš*, *gê*, *deš*, *dili*; 2, *min*, *man*; 3, *eš*; 4, *limmu*; 5, *ia*; 6, *aš*; 7, *umun*, *imin*; 8, *ussu*; 9, *ilimmu* (i. e., 5 + 4); 10, *ú*, *ġu*, *a*, *ġa*; 20, *neš*; 40, *nimin*; 60, *geš*; 600, *geš-u* (i. e., 60x10); and *nêr*; 3600, *šár*.

F. The Verb

The Sumerian verb offers the modern philologist a problem of supreme difficulty. On the one side it is so simple as to occasion surprise that men could use so crude a tool, and on the other it is agglutinated until the verb has drawn into or attached to itself by prefix or suffix almost the whole sentence. What is here given

must be regarded only as an effort to picture in bold outline a few of the phenomena.

The simple root of the verb is usually of one syllable only: *ag*, "make"; *gen*, "go"; *kú*, "eat." This simple root may have transitive or intransitive, causative, active or passive signification. To it may be added prefixes, infixes, and affixes, or it may be doubled to secure an intensive or causative meaning: *tu*, "enter"; *tu-tu*, "cause to enter, bring in." These prefixes, infixes, and suffixes are quite different in use from the familiar forms which we shall have before us in the discussion of the Babylonian and Assyrian languages. There inflexion, in the true sense, has been achieved, here in Sumerian the process can only be named agglutination. Examples may make this sufficiently clear for the present purpose: *du*, "build"; *mu-du*, "he built"; *mu-na-du*, "he built for him"; *mu-na-ni-du*, "he built it for him."

These are all simple verbs, but to such verbs as these a noun may be added, and a new verb be so compounded, as *igi*, "eye"; *dab*, "to seize," hence *igi-dab*, "to see"; *šu*, "hand"; *íl*, "to raise"; hence šu-íl, "to raise the hand, to pray."

The plural in verbs is expressed in the imperfect by an affix *eš*, and in the present by *-ene* or *-ne*.

There is no method of distinguishing the person in verbs; *mu-du* may mean either "I, thou,

or he built"; though if the person is to be emphasized the possessive pronoun may be added to the verb.

As a specimen of the appearance of the language, the very ancient inscription of Ur-Nina may serve. It is here reproduced in a photographic plate, in transliteration and translation.

(*a*) See photographic copy facing this page.

(*b*) Transliteration.

I. 1. (dingir) Nina + Ur 2. lugal 3. ŠIR-BUR-LA 4. dumu gu-NI-DU 5. é (dingir) Nin-su + gir 6. mu-dû 7. ib-gal 8. mu-dû 9. é (dingir) Nina 10. mu-dû II. 1. ki-nir 2. mu-dû 3. ba-gá 4. mu-dû 5. é-dam 6. mu-dû 7. é-PA 8. mu-dû 9. URÚ-NIG 10. mu-dû III. 1. ti-áš + ra 2. mu-dû 3. é (dingir) ga-tum-du(g) 4. mu-dû 5. abzu-e 6. mu-dû 7. ud é (dingir) Nin-su + gir 8. mu-dû 9. 10x7 še-gur 10. é-kú-bi . . . . . IV. 1. má . . . 2. kur-ta 3. gú-giš mu-gal 4. bád ŠIR-BUR-LA 5. mu-dû 6. abzu ban-da 7. mu-dû V. 1. (dingir) Nina nin-en 2. mu-tu(d) 3. a . . . 4. mu-dun 5 . . . . . .

(*c*) Translation.

Ur-Nina, king of Lagash, son of Gunidu, built the temple of Ningirsu, built the *ib-gal*, built the temple of Nina, built the *ki-nir*, built the *ba-ga*, built the *e-dam*, built the *e-pa*, built the *uru-nig*, built the *ti-ra-aš*, built the temple of Ga-tum-du(g), built the *abzu-e*. When he built the temple of Ningirsu, he delivered 70 measures of grain in the storehouse. In Ma—, the mountain, he collected wood, he built the wall of Lagash, built the *abzu-banda*, carved [the statue of] Nina, the lady . . . he dug the canal . . . the canal . . .

III. The Assyro-Babylonian Language

The earliest Semitic peoples of the Tigris-Euphrates Valley who rose to political power wrote their inscriptions in the Sumerian lan-

Sumerian placque of Ur-Nina, king of Lagash. The inscription is transliterated and translated on the opposite page.

[Reproduced from E. de Sarzec et L. Heuzey, *Découvertes en Chaldée.*]

guage and in the Sumerian cuneiform script. When their political influence, which had been small at first, rose to dominance in the period of the great conqueror, Sargon I, they naturally began to write in their own Semitic tongue, and quite naturally also used the script that was nearest at hand, and to which scribes were accustomed, that is, the cuneiform. It had been awkward and difficult enough as a means of expressing the Sumerian language, but for the Assyro-Babylonian language it was quite unsuitable. It was, for example, incapable of differentiating the characteristic sibilant and guttural sounds of the Semites. Nevertheless, so strong was the power of tradition, it lasted on far beyond the period of Semitic rule in Assyria and Babylonia, enduring at times much buffeting from unskilful scribes, and also receiving minor improvements and amendments from the learned.

The Assyro-Babylonian language belongs to the family of Semitic languages. This family may be divided into the following groups: (*a*) The Eastern, (*b*) The Western, the latter being subdivided into northwestern and southwestern.

The Eastern Semitic group is composed only of Babylonian and Assyrian, two dialects of the same language, and frequently called simply Assyrian because the Assyrian inscriptions were first found and their grammar earliest studied.

The northwestern Semitic group contains the Canaanite and Aramaic languages. The former is represented by certain glosses in the Tell-el-Amarna letters, by the Moabite stone, but most of all by the Hebrew language of the Old Testament, and in its later forms especially by the Talmud. To this Canaanite form belongs also the Phœnician language, represented in many inscriptions, and its descendant, the Punic, or language of Carthage in the Roman period. These Canaanite dialects are not numerous, but, on the other hand, the Aramaic is exceedingly rich in its varied manifestations. It begins to be known to us first by the inscriptions of Panammu and Bar Rekub of Syria in the Eighth Century before Christ; and is further displayed in letters of the Jewish colony at Elephantine, Upper Egypt, of the Fifth Century. The Aramaic languages divide into Western and Eastern, the former represented by the Biblical Aramaic of Daniel, Ezra, and Jeremiah x, 11, and the Targumic of the Old Testament versions, with the dialects of the Samaritans, the Palmyrenes, and the Nabateans. The Eastern Aramaic is represented by the Jewish dialect of the Babylonian Talmud, and by the great Syriac language of the Christian peoples of Edessa and their widely-scattered descendants, some forms of which are still living in the mountains of Tur-Abdin and in the neighborhood of Mosul.

The southwestern Semitic group comprises the Arabic and Abyssinian languages. The former, one of the greatest literary languages of the world, begins, for us, in its early pre-Islamic poems, and extends down through the Quran to the vast commentary and other religious material which gathers about it and to the rich secular literature of later days. It lives on in numerous dialectic variations, spoken by people who cover a great extent of territory in Syria, Egypt, North Africa, Malta, Arabia, and extending also into Asia to and beyond the Tigris-Euphrates Valley. One branch of it developed separately among the south Arabians and is represented in many inscriptions stretching from perhaps the twelfth to the sixth-century A. D., and in two dialects, the Sabæan and the Minæan, descendants of which still survive as living tongues in Mahra and in the island of Socotra.

Closely related to Arabic are the Abyssinian languages, of which the chief literary exponent is the language commonly called Ethiopic, but named *Geez* by its own people, while the speech of these people who had migrated from Arabia lives on in Tigre and Tigriña and in the Amharic of southern Abyssinia.

To these, the chief Semitic languages now known and studied, there probably belonged at some extremely early period the Ancient Egyptian language, early severed from the rest, and

therefore departing most widely from the characteristics common to the others. There is also a distinct relationship between these Semitic languages and the great Hamitic family of human speech which stretches in a wide sweep from the Berbers in North Africa through the Cushites, such as the Saho, Galla, and Somali, far away into East Africa. No relationship has, however, ever been established between the Semitic languages on the one hand and the Indo-European on the other.

This hasty sketch shows, however imperfectly, the relation subsisting between the Assyro-Babylonian language and the many other tongues of peoples either related to them by blood or in contact with them socially or politically.

We may now turn to view in simple outlines the main peculiarities of the Semitic speech of the Assyrians and Babylonians, making in passing a few comparisons with other and more commonly known languages of the same family, and especially with Hebrew, for with the language of the Old Testament it has the closest resemblance.

The sounds of the Assyro-Babylonian language are expressed by:

(*a*) The Vowels, a, e, i, u, â, ê, î, û, ai, ia.

(*b*) The Consonants, ' a breathing, b, g, d, (w,) z, ḫ, ṭ, (y,) k, l, m, n, s, p, ṣ, ḳ, r, š, ṯ.

The greater richness of Assyrian in sounds,

differentiated each from other by very slight nuances, as compared with Sumerian, made the use of the Sumerian script a poor tool indeed for their expression and brought about many awkward failures to reproduce the Semitic words. But for their presence in other Semitic languages we should not know, in many instances, the true roots of Assyrian words.

A. The Pronoun

	(Hebrew)	
anâku I	(anôki)	*anînu, nîni* we
atta thou (m.)	(atta)	*attunu* ye (m.)
atti thou (f.)	(att)	*attina* ye (f.)
šu he	(hû)	*šun(u)* they (m)
ši she	(hî)	*šina* they (f.)

The possessive pronouns are expressed by suffixes and were, with nouns,

ia, î, â mine	-ni our
-k(a) thine (m.)	-kun(u) your (m.)
-k(i) thine (f.)	-kina(a) your f.)
-š(u) his (m.)	-šun(u) their (m.)
-š(a) her (f.)	šin(a) their (f.)

with verbs, used to express the oblique cases,

-ni me	-na us
-k(a) thee (m.)	kun(u) you (m.)
-ki thee (f.)	kin(a) you (f.)
-š(u) him	šun(u) them (m.)
-š(i) her	šin(a) them (f.)

The relative pronoun, as used in other Semitic languages, does not exist, the relationship of

relative clause to principal being expressed by a sort of genitive construction, or introduced by the particle ša.

B. Noun and Adjective

The noun is formed almost exclusively from a root of three consonants, and distinguishes two genders, masculine and feminine, the latter usually employed also as the neuter. The feminine is formed by the addition of *-atu* or *-tu* to the stem, as *šarru*, king *šarratu*, queen *maru*, son, *martu* daughter.

The noun has normally three numbers, singular, plural, and dual, and three cases, Nominative, Genitive, and Accusative. In early times the plural of masculine nouns ended in "û," in the middle period commonly in "*ani*," in the later the most common form is the ending "ê," thus, kalbu, dog; kalbû, dogs; *alu*, city; *alâni*, cities; *šamu*, heaven; *šamê*, heavens. Masculine adjectives in the early period form the plural in *-ûtum*, nominative, and *-ûtim*, genitive and accusative. The plural of feminines both noun and adjective is *-âtum* nominative, and *âtim*, genitive and accusative. The dual, which was comparatively frequent in early times, ended in -ân nominative and ên genitive and accusative.

The Assyrian bound nouns in a union by means of the device called the construct relation. When two nouns are so related that the second would be in the genitive case in an Indo-

European language, such as *nomen regis*, the name of the king, in Assyrian the first noun would be said to be in the construct state, was pronounced closely in connection with the second and tends therefore to be shortened, thus: *šumu* name, but *šum šarri* the name of the king.

C. Particles

The prepositions were generally originally nouns, as *libbi* "within" from the noun *libbu* heart, *ṣir* "upon" from *ṣiru* "back," though *ina*, in, *ištu* from, *ana* to, and others, cannot be traced back to original substantive forms.

The negative particles are *la*, *ul*, and *ai*.

D. The Adverb

Every noun may be used adverbially, but besides this there is a large number of adverbs, such as:

(*a*) local, *agannu* here, *ina libbi* there.
(*b*) temporal, *adu*, *ûmâ*, now.
(*c*) modal, *ki'âm* so, *ma*, *umma* thus, or as follows.

E. The Numeral

Masculine	Feminine
1. *išten*	*ištênit*
2. *šinâ*	*šittâ*
3. *šalâšu*	*šalaš* (*l*) *tu*, *šelaltu*
4. *arba'u*	*irbittu*
5. *ḫamšu*	*ḫamiš* (*l*) tu
6. *šeššu*	*šeššit*
7. *siba*	*sibittu*

E. The Numeral—Continued

	Masculine	Feminine
8.	*samânu*	*samântu*
9.	*tišu*	*tiltu*
10.	*ešru*	*ešertu*
20.	*ešra* (really a dual form)	
40.	*arbâ*	
60.	*šušši, šûšu*	
600.	*nêru*	
3600.	*šar*	

F. The Verb

The verb in Assyro-Babylonian is conjugated as in the other Semitic languages, and not built up by agglutination as in Sumerian.

The Verb distinguishes two tenses, the Present and the Preterit, and to these adds a form called by grammarians the Permansive, which expresses a state and is used much like the Latin perfect participle *alu šakin*, the city is (was) situated, which corresponds to *oppidum situm est* (*erat*). It is seldom used in an active sense. It may be used for past, present, or future time and with the particle *lu* has a precative meaning *lû balit*, may he live.

The Verb distinguishes Indicative, Energicus, and Subjunctive moods, and forms an imperative, participles and infinitive.

The stems of the Assyrian Verb are:

(1) PEAL (I, 1.) the ground formation of transitive or intransitive signification.

(2) PIEL (II, 1) with the second radical doubled, and expressing an intensive meaning, with the property also of making intransitives transitive.

(3) SHAFEL (III, 1) with a prefixed š(a) and causative meaning.

(4) NIFAL (IV, 1) with prefixed *n*, and usually of passive meaning.

From these four principal stems there are formed by an infixed ta between the first and second radicals the stems

1.) IFTEAL (I, 2).
2.) IFTAAL (II, 2).
3.) ISHTAFAL (III, 2).
4.) ITTAFAL, assimilated from Intafal (IV, 2).

These forms were probably originally used with a Middle voice signification, but in practice are either indistinguishable from the foundation stems, or express their passives.

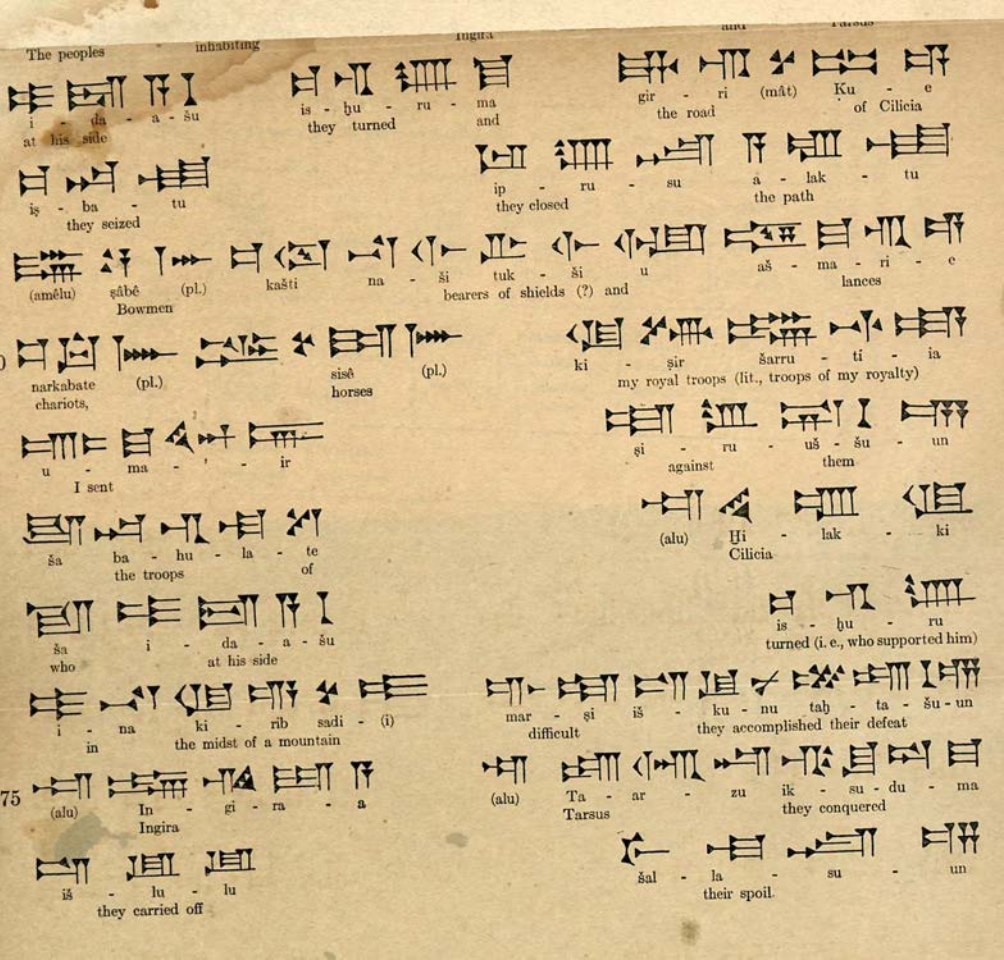
By means of the further infixing of an n, these stems become

1.) Iftaneal (I, 3).
2.) Iftanaal (II, 3).
3.) Ishtanafal (III, 3).
4.) Ittanafal (IV, 3).

But these forms are rare, and of little importance. The scheme of the regular verb may be shown by the use of the verb *kašadu*, to conquer. No single verb possesses all the forms here given, though all these forms actually exist in some verb in the language.

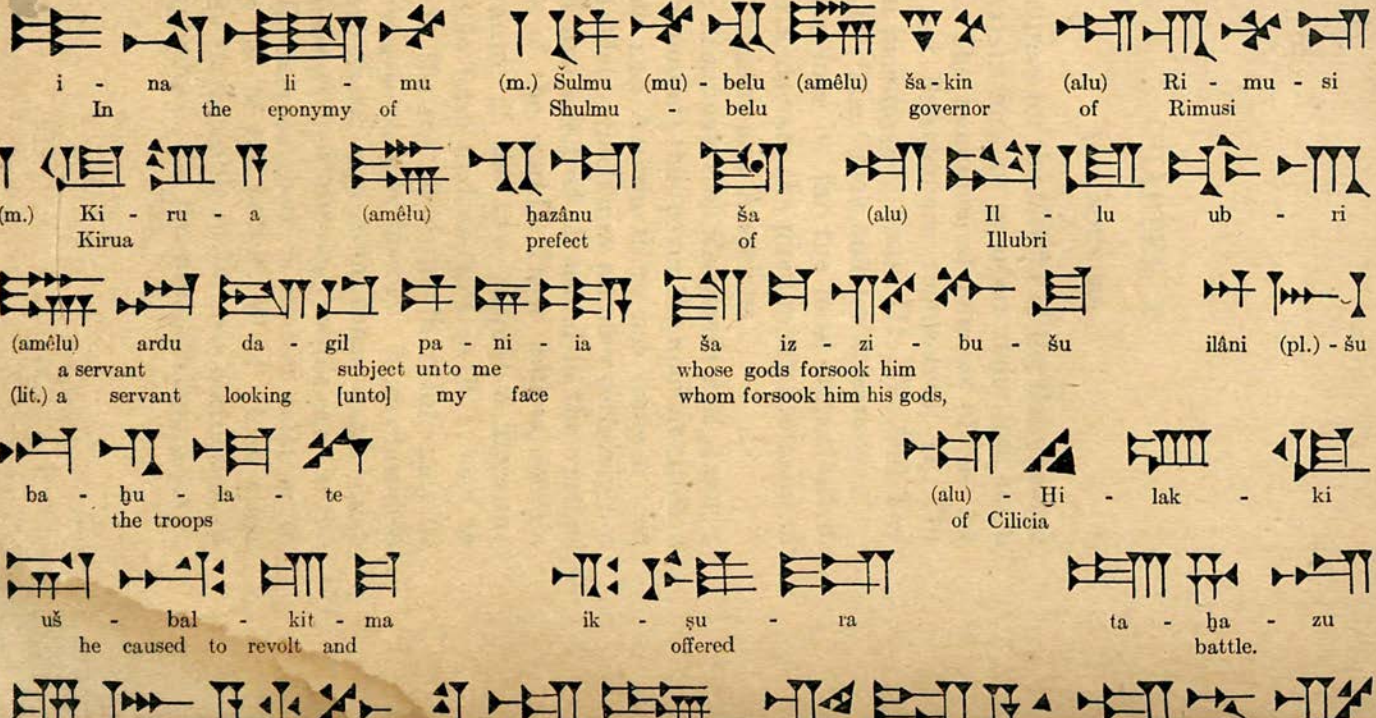
As a specimen of the appearance of the language the accompanying brief extract from the Annals of Sennacherib may serve.

Stems	Preterite	Present	Imperative	Participle	Permansive	Infinitive
Peal	ikšud	ikášad	kušud	kaš(i)du	kašid	kašádu
Piel	ukaššid ukešid	ukaššad	kuššid kašid	mukaššidu	kuššud	kuššudu
Shafel	ušakšid usekšid	ušakšad	šukšid	mušakšidu	šukšud	šukšudu
Nifal	ikkašid	ikkášad	nakšid	mukkaš(i)du	nakšud	nakšudu nakašudu
Ifteal	iktášad iktéšid	iktášad	kitšad kitášad	muktaš(i)du	kitšud kitášud	kitšudu kitášudu
Iftaal	uktaššid	uktaššad		muktaššidu	kutaššud	kutaššudu
Ishtafal	uštakšid	uštakšad	šutakšid	muštakšidu	šutakšud	šutakšudu
Ittafal	ittakšad	ittakšad		muttakšidu		šitakšudu itakšudu
Iftanal	iktanášad	iktanašad				
Ittanafal	ittanakšad	ittanakšad				


The peoples
inhabiting
Ingira
i - da - a - šu
at his side
is - ḫu - ru - ma
they turned
and
gir - ri (mât) Ḳu - e
the road
of Cilicia
iṣ - ba - tu
they seized
ip - ru - su
they closed
a - lak - tu
the path
(amêlu) ṣâbê (pl.)
Bowmen
kašti
na - ši
tuk - ši u
bearers of shields (?) and
aš - ma - ri - e
lances
70
narkabate (pl.)
chariots,
sisê (pl.)
horses
ki - ṣir šarru - ti - ia
my royal troops (lit., troops of my royalty)
u - ma - ' - ir
I sent
ṣi - ru - uš - šu - un
against
them
ša ba - hu - la - te
the troops
of
(alu) Ḫi - lak - ki
Cilicia
ša i - da - a - šu
who
at his side
iṣ - ḫu - ru
turned (i. e., who supported him)
i - na ki - rib sadi - (i)
in
the midst of a mountain
mar - ṣi iš - ku - nu taḫ - ta - šu - un
difficult
they accomplished their defeat
75
(alu) In - gi - ra - a
Ingira
(alu) Ta - ar - zu
Tarsus
ik - su - du - ma
they conquered
iš - lu - lu
they carried off
šal - la - su - un
their spoil

As a specimen of the appearance of the language the following brief extract from the Annals of Sennacherib may serve.

Cuneiform Texts from Babylonian Tablets, etc., in the British Museum (King), xxvi plate 15, Column IV, lines 61—



i - na li - mu (m.) Šulmu (mu) - belu (amêlu) ša - kin (alu) Ri - mu - si
In the eponymy of Shulmu - belu governor of Rimusi

(m.) Ki - ru - a (amêlu) ḫazânu ša (alu) Il - lu ub - ri
Kirua prefect of Illubri

(amêlu) ardu da - gil pa - ni - ia ša iz - zi - bu - šu ilâni (pl.) - šu
a servant subject unto me whose gods forsook him
(lit.) a servant looking [unto] my face whom forsook him his gods,

ba - ḫu - la - te (alu) - Ḫi - lak - ki
the troops of Cilicia

65 uš - bal - kit - ma ik - ṣu - ra ta - ḫa - zu
he caused to revolt and offered battle.

CHAPTER X

THE SOURCES

THE sources for the history of the Babylonians and Assyrians may be grouped under four main heads: I. The monumental remains of the Assyrians and Babylonians themselves; II. The Egyptian hieroglyphic texts; III. The Old Testament; IV. The Greek and Latin writers.

Of these four by far the most important in every particular are the monumental remains of the Babylonians and Assyrians.

I. *The Monuments of Babylonia and Assyria.* From the mounds that cover the ancient cities of Babylonia and Assyria there has come a vast store of tablets, which now number certainly not less than five hundred thousand in the various museums of the world. These tablets contain the literature of the two peoples, a literature as varied in form and content as it is vast in extent. In the end all of this literature may be considered as sources for history. Many business tablets are dated, and from these dates much may be learned for chronology, while even in the tablets themselves there is matter relating to the daily life of the people, all of which must ultimately be valuable in the reconstruction of the social history. So also are all religious texts,

all omens and incantations, sources for the study of the history of religious development. But as we are here concerned chiefly with political history, the primary sources are the so-called royal inscriptions, those, namely, that were written for kings, for their libraries and collections or for their glorification.

These divide, roughly, into two main classes: A. Legendary, and B. Historical and Chronological.

The legends begin in mythological explanations of the mysteries of the physical universe and pass on slowly into stories of heroes with whom were mingled various threads of real history. Our only source of information concerning some of these was for a long time Berossos, to whom alone we owe the tradition of a primitive revelation and the legends of the early kings.[1] A number of similar legends have been preserved for us in their original cuneiform, of which the myth of Adapa,[2] the king of

[1] For Berossos as a source see more fully page 388. The Primitive Revelation is preserved in Eusebius (*Eusebii Chronicorum Liber Prior*, edidit Alfred Schöne, Berlin, 1875, col. 14, f.), and the Early Kings by the same (*op. cit.*, p. 7, f.). Both are translated with the original Greek text in Rogers, *Cuneiform Parallels*, pp. 76, ff.

[2] The myth of Adapa exists upon four fragments, three of which belonged to the library of Ashurbanipal, and the fourth was found among the archives of Amenophis IV (1377–1361, B.C.), all being copies of earlier Babylonian originals. The texts of the four tablets are published as follows: 1. V. Scheil, *Recueil de Travaux relatifs a la Philologie et à l'Archéologie Egyptiennes*, xx (1898), pp. 127, ff. 2. H. Winckler und L. Abel, *Der Thontafelfund von El-Amarna*, No. 240; J. A. Knudtzon, *Die El Amarna Tafeln*, No. 356. 3. Jensen, *Keilinschriftliche Bibliothek*, vi, 1, p. xvii, f., in transcription only. 4. A. Strong, *Proceedings of the Society of Biblical Archæology*, xvi (1894), pp. 274, ff.

Kutha,[1] and the legend of the birth of Sargon[2] are excellent examples. From these and similar legends there may, in some instances, be extracted kernels of historic truth not to be overlooked by the serious investigator.

The original historical sources of Babylonian and Assyrian history differ so widely in essential points that they must be separately considered, first the Babylonian, and then the Assyrian.

The Babylonian historical inscriptions may be divided into two great periods: (*a*) Those belonging to the period before Hammurapi (circa 2000 B. C.), and (*b*) those from Hammurapi to Nabonidus (555–539 B. C.).

In the first period by far the larger portion of

The four tablets are translated into German by Jensen in *Keilinschriftliche Bibliothek*, vi, 1, pp. 92, ff.; into French by Dhorme, *Choix de Textes Religieux Assyro-Babyloniens*, pp. 148, ff. Besides these No. 1 and No. 4 by Scheil, *op. cit.;* No. 2 by Harper, *Beiträge zur Assyriologie*, ii, pp. 420, ff.; J. A. Knudtzon, *op. cit.*; Zimmern in Gunkel's *Schöpfung und Chaos*, pp. 420, ff.; No. 4 by Strong, *op. cit.*, and all four into English by Rogers, *Cuneiform Parallels*, pp. 67–76.

[1] The legend belonged in Ashurbanipal's library and is but partially preserved upon two tablets in the British Museum K. 5418a, and K. 5640 (see Bezold's *Catalogue of the Kouyunjik Collection*), and the original text is published in *Cuneiform Texts from Babylonian Tablets, etc., in the British Museum*, xiii, p. 39–41. An old Babylonian fragment, now in the collection of J. Pierpont Morgan was published by Scheil in *Recueil de Travaux relatifs à la Philologie et à l'Archéologie Egyptiennes et Assyriennes*, xx (1898), pp. 65, f. For translations into German compare Zimmern, *Zeitschrift für Assyriologie*, xii, p. 317, ff.; Jensen, *Keilinschriftliche Bibliothek*, vi, 1, p. 290, ff.; Otto Weber, *Die Literatur der Babylonier und Assyrer*, Leipzig, 1907, p. 202, f.; and Ungnad, *Altorientalische Texte und Bilder*, Tübingen, 1909, p. 76, f.

[2] The original belonged to Ashurbanipal's library and is now in the British Museum (K. 3401—Sm. 2118 Bezold, *Catalogue* ii, 529). The text was first published in iii R. 4, No. 7, and by King in *Cuneiform Texts*, xiii, pl. 42, ff., and by him again in *Chronicles concerning Early Babylonian Kings*, ii, pp. 87, ff. It has been often translated, most

the texts are votive inscriptions, inscribed upon objects of beauty or of value dedicated to the deities, or describing such, or they are building inscriptions primarily given to the description of temples erected by kings or princes to the gods. As a specimen of the former the votive inscription of Entemena (circa 2900 B. C.) upon the magnificent silver vase which is in these words:

> To Ningirsu, hero of Enlil, hath Entemena, *patesi* of Lagash, the chosen of the heart of Nina; Grand *patesi* of Ningirsu; son of Eannatum, *patesi* of Lagash, to Ningirsu, his king who loveth him, hath he made a vessel of pure silver . . . . and for his life hath brought it to Ningirsu of Eninnu. At that time Dudu was priest of Ningirsu.[1]

As a specimen of the briefer form of building text the following may suffice:

> To Bau, gracious lady, daughter of Anu, hath Urbau, patesi of Lagash Child of Ninagal, built her temple in the holy city.[2]

The only historical material of importance upon such documents as these consists in the names,

recently into German by Ungnad in *Altorientalische Texte und Bilder*, i, p. 79, f., and into English by King, l. c., and by Rogers, *Cuneiform Parallels to the Old Testament*, p. 135, f.

[1] E. de Sarzec et L. Heuzey, *Découvertes en Chaldée*, pl. 43 and 43 bis, and p. xlvii, and translated by Thureau-Dangin, *Die Sumerischen und Akkadischen Königsinschriften*, p. 35. Leipzig, 1907.

[2] From a clay nail in the Louvre, unpublished, translated by Thureau-Dangin, *Die Sumerischen und Akkadischen Königsinschriften*, p. 63. Leipzig, 1907.

titles, and more or less extended genealogical connections of the kings. Some, however, of the earlier kings, such as Eannatum and Lugal-zaggisi, give various details of political affairs useful in the reconstruction of events.

By far the most important, as also the most extended, inscriptions of this early period belong to Gudea, patesi of Lagash (circa 2450 B. C.), whose two great cylinders, the one containing about eight hundred lines of writing and the other about five hundred, give a marvellous picture of the common life and thought and feeling, as well as some details of political life in that far distant age. For his buildings he had drawn materials from Phœnicia on the one hand and Arabia on the other, and the peaceful journeys of emissaries in search of them are described, and to these are added allusions to affairs of state important as historical material. In all his texts there is mention of but one exploit in war,[1] but prayer and praise to gods, and dreams and visions fill the space. All these kings wrote in Sumerian, although signs of Semitic influence are not altogether wanting in them. From this early period Semitic inscriptions in the same style have come down to us from Sargon and his son Naram-Sin, kings of Akkad.

With Hammurapi begins the new period of historical writing, as there also began new po-

[1] See the narrative of his reign, II, p. 46.

litical conditions after northern and southern Babylonia had been united under his skilful and beneficent sway. From this time onward the language is prevailingly Semitic, but the style and form of the Sumerian records is carefully followed as the norm. If this seems quite natural, when one considers the power of artistic tradition, it seems more strange that the spirit of the old texts continues to the latest day of Semitic rule in Babylon. From Hammurapi to Nabonidus, a period of about fifteen millenniums, the Babylonian kings wrote always with a deep religious tone, and paying almost no heed to military glory, wrote ever of the building of temples and palaces, the digging of canals, or other great works of peace. The tone of all these texts is epic rather than historical, and their rhythm and cadence poetical rather than prosaic.

The texts of Hammurapi are both numerous and lengthy, and from him come also a large number of letters and despatches, valuable for social and institutional history. No other king of the first Babylonian dynasty has left considerable documents except Samsuiluna. From that time onward there are periods of bloom in historiography in the periods Kassites, the Tell-el-Amarna letters, and Nebuchadrezzar I, after whom comes a great dearth of the longer texts. There is a renaissance of such literature again in the days of Shamasshumukin (668–648 B. C.),

reaching its height in Nebuchadrezzar II (604–561 B. C.) and Nabonidus (556–540 B. C.).

The Assyrian historical inscriptions differ as much from the Babylonian as the two peoples were differentiated in spirit and character. The Babylonians were a peaceful people who devoted their energies to the works of peace, and wrote, therefore, of little else. The Assyrians were a people of war. Their political organization was military, and the note of the bugle sounds through all their historical texts. From the Sumerians and Babylonians they took over the religious tone, and prayers and ascriptions of trust and praise are in all the texts. They are nevertheless much less religious than the Babylonian, and the gods seem often to have no real function save to glorify the king and add luster to his arms.

These royal inscriptions begin very early in Assyrian history, and then chiefly as mere records of names and titles. These early kings caused their names and titles to be written in some way upon all their constructions. Even little statuettes and vases bear the royal mark, while the bricks used in the erection of large buildings were stamped with the king's name and the names of the lands over which he ruled. Simple and uninteresting though these often are, they give the political relations of lands and, in connection with other materials, enable us to trace out the line of political development. This

style of name and title writing continues down to the fall of the Babylonian empire. Alongside of it, however, there was early developed a narrative form of royal inscription, giving an account of the campaigns and conquests of the royal arms. These narrative inscriptions are of three kinds: 1. Annals; 2. Campaign inscriptions; 3. General votive inscriptions.

The historical texts of Assyrian kings, whether annalistic or campaign or votive, have usually a stereotyped division into three main parts: (1) An enumeration of the gods, to whom the king owes special fealty with elaborate ascriptions of praise to and expression of confidence in them. This is followed by a glorification of the king, with his genealogy, and often a summary in bold words of his acts of prowess. This is followed by (2) the main body of the text, with its narrative of battle, siege, or building, and (3) a closing formula with curses upon any who should destroy or deface the record, and sometimes a blessing on those who might preserve and protect them. Commonly there is a colophon giving the precise date of the writing. Seldom does the body of these texts rise into dignity of phrase, or even into sharpness of delineation or beauty of diction. The words fall rather as blows, and the color is always the red of fire and of blood. Once, indeed, is there found a description of a battle, full of life, movement, light and shade, and fit without a

word's change to come over into modern literature.[1]

In the annalistic inscriptions the deeds of the kings are arranged in chronological order by years of reign. Of all the ancient sources these are by far the most important, for from them we learn the exact order of events, often a matter of first-rate importance. Besides these texts the kings have left many inscriptions in which the events are arranged in campaigns. While this second class is just as important as the first for the mere statement of events, it is, nevertheless, much less valuable to us. From the arrangement of campaigns it is sometimes difficult to ascertain the exact order of events in time, and hence the sequence of conquests or of defeats. The general or votive inscriptions begin usually with a most elaborate ascription of titles, and with all manner of boasting phrases concerning the king's prowess. They then set forth the king's conquests, arranged in groups, and usually after a geographical plan. The order often widely departs from a chronological one, and as some kings have left us only texts of this kind, it is impossible to understand the sequence of events during certain reigns.

Besides these larger texts, the Assyrians have left a vast mass of minor records. Like the Babylonians, they also stamped names and titles

[1] The reference is to the description of the battle of Chalule by Sennacherib. Taylor Cylinder, Col. V, lines 50, ff.

upon building bricks, upon thresholds of palaces and temples, upon window supports, upon the bodies of the great symbolic colossi, which stood silent guard over their buildings—indeed, in almost every conceivable place. The genealogical relations expressed on such texts are often of priceless value in properly locating the kings, and so become historical documents of distinction.

In addition to these historical sources the Babylonians and Assyrians have left a great mass of chronological material to which we must give attention later (see Chapter XIII).

In respect of their value as sources of knowledge these monumental remains can only be said to be as valuable as the records of other ancient peoples. They bear for the most part the stamp of reasonableness. Often, indeed, do they contain palpable exaggerations of kingly prowess, of victories, and of conquests. They therefore require sifting and rigid criticism. But in most cases it is possible to learn from the issue of the events the relative importance of them, and so be able to check the measure of extravagance in the narrative. When subjected to the same tests and tried by the same canons of criticism the Assyrian and Babylonian monuments yield as just and true a picture of their national history as the sources of Greek and Roman history to which the world has been so long accustomed.

The second source is of far less importance

than the first, yet is at times exceedingly valuable.

II. *Egyptian Hieroglyphic Texts* are of very slight importance as direct sources of knowledge concerning the political history of Babylonia and Assyria, but they contain many places and personal names useful in the elucidation of corresponding names in Assyrian texts.

The third source, while more important than the second, is still not so valuable as the primary monumental source.

III. *The Old Testament.* The gain of the Old Testament has been greater from Assyrian studies than the reverse, though the apologetic value of monumental testimony has often been greatly exaggerated. Nevertheless, it must not be forgotten that it was interest in the Old Testament which inspired most of the early explorers and excavators and some of the earlier decipherers and interpreters, and that from the historical notices in the Old Testament came not a few points for the outworking of details in the newly discovered inscriptions. The historical portions of the Old Testament which are still of importance as sources for Assyrian and Babylonian history are especially 2 Kings, while of even greater importance, in many instances, are the prophets Isaiah, Nahum, Jeremiah, and Ezekiel.

It is to be noted that the Old Testament makes direct and valuable contributions as a historical

source only from 745 B. C., the beginning of the reign of Tiglathpileser IV. The notices of the earlier periods are too vague, or too doubtful, as to the period of their origin to be more valuable than as confirmatory or supplementary to the original Babylonian or Assyrian texts.

IV. *The Greek and Latin Writers.* As sources the Greek and Latin writers once held first place, but are now reduced to a very insignificant position by the native monumental records. Nevertheless, they still retain some importance, and need constantly to be used to check and control the native writers as well as to assist in the ordering of their more detailed materials.

First in importance among all the classical writers stands Berossos, or Berosos, for so the name is also transliterated into Greek. He was a Babylonian by origin, and a priest of the great god Bel. The dates of his birth and of his death are equally unknown, but it is clear that he was living in the days of Alexander the Great (356–323 B. C.),[1] and continued to live at least as late as Antiochus I Soter (280–261 B. C.).[2] He wrote a great work on Babylonian history, the title of

[1] See Eusebius, *Chronica*, ed. Alfred Schoene. Berlin, 1875, p. 11.

[2] Tatian (Oratio ad Graecos, chap. 36, ed. Edvardus Schwartz in Harnack and Gebhardt, *Texte und Untersuchungen*, iv, p. 38) plainly states that the work was dedicated to Antiochus I Soter, Eusebius says to Antiochus II, but wrongly; compare Schwartz, *op. cit.*, p. 56. Sayce maintains that it was dedicated to Antiochus II (*Encyclopaedia Britannica*, 11th Ed. s. v. *Berossus*). The Eusebius passage looks much like a conflate reading, or at least a misunderstanding of the Tatian text. See the passages assembled together in Mueller (Carl et Theodore), *Fragmenta Historiarum Graecorum* II, 495. Paris, 1841.

which was probably *Babyloniaca*,[1] though it is also referred to under the title of *Chaldaica* by Josephus and Clemens. It was dedicated to his patron, Antiochus I Soter. The *Babyloniaca* was divided into three parts, of which the first dealt with human history from the chaos to the flood, the second from the flood to Nabonassar, and the third from Nabonassar to Alexander. The first two consisted only of lists of kings without any proper historical narrative, while with the third began the real story of events.

Both lists and narrative of Berossos could not fail to be of considerable moment to us, if we had them in even fairly well preserved form. Unhappily, however, the original work has perished, and all that remains are excerpts which have come to us after much copying and many transfers from hand to hand. The history of these fragments is a very curious example of book making in antiquity. In the Mithraditic war a certain Alexander of Miletus was taken prisoner and carried to Rome, where he was sold as a slave to Lentulus. In 82 B. C. he received the

[1] The title seems really to have been Babyloniaca, and not Chaldaica, though the tradition is not perfectly clear. Tatian makes it Chaldaica, but calls the author a Babylonian (see reference in the note above). Josephus (*Ant. Jud.* i, 3, 6, i. e. par 93 in Naber's ed., vol i, p. 20, Teubner, 1888) calls him a Chaldaean, and the book Chaldaica (Josephus *Contra Apion* i, 20, ed. Naber vi, p. 210). George the Syncellus (i. e. the cell companion) (*Chronographia*, p. 28 B. See Corpus Scriptorum Historiæ Byzantinæ, Georgius Syncellus, vol. i, p. 50. Bonn, 1829) has it Babyloniaca. The original Greek text of George the Synkellos may be most conveniently found in *Corpus Scriptorum*, Historiæ Byzantinæ, Dindorf, vols. i and ii. Bonn, 1829.

Roman citizenship from Sulla, from whom also he received the name Cornelius,[1] and lived in Rome with some distinction as a man of letters. There he wrote an enormous number of books relating to ancient history, and on that account received the name of Polyhistor.[2] The period of his greatest distinction and productivity was between 70 and 60 B. C. His historical works were simply excerpts from the writings of his predecessors, and in this manner he compiled a history of Assyria, the exact title of which is not now known. The history was made up of extracts from Berossos, Apollodoros (*Chronica*), and the third book of the Sibyllines, and was worked over into pseudo-Ionic Greek by Abydenos. It came also into the hands of Josephus and of Eusebius. Josephus was seeking especially those parts of the history which illustrated the history of the Jews, and naturally took from Alexander only those parts which were suitable for his purpose. In like manner, also, Eusebius copied only portions. By this process we have preserved in Josephus, *Antiquities of the Jews*, and in Eusebius, *Chronica*, small parts of the great work of Berossos, while the dynasties have come down to

[1] There is perhaps some doubt whether he owes the name Cornelius to Sulla or to Lentulus, who also belonged to this gens.

[2] On the life of Alexander Polyhistor compare J. Freudenthal, *Hellenistische Studien*, Heft I, *Alexander Polyhistor und die von ihm erhaltenen Reste jüdischer und samaritanischer Geschichtswerke.* Jahresbericht des jüdisch-theologischen Seminars, Breslau, 1874, p. 17, and the further references there given in footnote, especially Rauch, *De Alexandri Polyhistoris vita atque scriptis.* Heidelberg, 1843.

us from George the Synkellos. Wherever we can secure enough of Berossos to compare with the native monumental sources we find most remarkable agreement with them. From Berossos but little is to be learned of direct value, but the support which we gain from these fragmentary remains for the general course of the history is very great. As will later appear, chronological material of much complexity and difficulty is obtained from certain parts of these fragments.

The next Greek writer who comes before us as a possible source is Ktesias. He was a contemporary of Xenophon, and was born of the family of the Asclepiadæ at Cnidus. He came thence as a prisoner of war to Persia, where he spent seventeen years at the court, highly honored for his medical skill, being body physician to Artaxerxes Mnemon, whom he healed of a severe wound received at the hands of Cyrus in the battle of Cunara, B. C. 401.[1]

In 399 he returned to his native city, and in the ease thus achieved proceeded to work up into historical form the materials he had collected. He wrote in twenty-three books a history of Persia (Περσικά) in the Ionic dialect. The first six books treated the history of Assyria and Media, then books seven to eleven were given

[1] This period must have been at the earliest 404–387, at the latest 401–384 B. C. It appears that Carolina Lanzani (*I Persica de Ctesia, Rivista di Storia Antica*, N. S. 5, 6, Messina, 1900, 1901) has proved that Ktesias was in Persia in 393, and Holzapfel (*Berliner Philolog. Wochenschrift* 25 [1905], 1266) in his review of the book has carried the proof further.

to the anecdotes and legends of Cyrus I in very elaborate form. The reigns next following were treated more cursorily, until Artaxerxes II, whose reign up to 398 B. C. filled the last three books. In this work he claims to have used the royal annals of the Persian kings (*διφθέραι βασιλικαί*). His work was extensively used in the ancient world,[1] and wherever quoted became at once the object of sharp controversy. He was accused of being untrustworthy and indifferent to truth, and the charges and the controversy continue until to-day. The severity of the judgments[2] against him probably arises partly out of the acrimonious manner in which he attacked Herodotus, and partly out of the fact that he used Persian sources for his history. In the years of his Persian residence he had so completely absorbed the Persian point of view as to seem hardly just to the Greek conception of their history in its relations to the Persians. If we

[1] Gilmore, *The Fragments of the Persika of Ktesias*, London, 1888, pp. 2, 3, names no less than thirty-four writers, among them Strabo, Plutarch, and Xenophon, who have preserved portions of Ktesias. Compare the exhaustive study by J. Marquart, *Die Assyriaka des Ktesias*, *Philologus*, Supplementband vi, pp. 501–658. Göttingen, 1891.

[2] As a specimen of a sharp modern judgment upon him, both personally and as an author, one may refer to Marcus v. Niebuhr, *Geschichte Assur's und Babel's*. Berlin, 1857, pp. 289, ff. While as a specimen of a more favorable judgment see Sayce, *The Ancient Empires of the East*, Herodotus, i–iii, London, 1883, p. xxxiii: "It is certain that he (Ktesias) was justified in claiming for his history the authority of Persian documents, and that many of the charges of falsehood brought against him must be laid not upon him, but upon his Eastern friends. His history of Assyria is much like the Egyptian history of mediæval Arab writers, clothed only in a Greek dress;" and also Paul Rost, *Untersuchungen zur altorientalischen Geschichte*, pp. 109, 110. Mitteilungen der Vorderasiatischen Gesellschaft, 1892, 2, Berlin.

subject to modern criticism the fragments of his history that remain, our judgment must be that the first six books, relating to the early history of Assyria, are valueless. Whether this was due to the fact that he was unable himself to read the sources which he used, and was therefore obliged to rely upon the word of others to tell him the story found in them, or that he must be accused of actually inventing and setting forth as history an entertaining mass of empty fables, will probably never be decisively determined. The books themselves have perished. Only fragments of them survive in the quotations by Diodorus and Eusebius and others, and in an epitome by Photius.[1] For our purpose they scarcely come into the question at all.

Last of all among the classical writers we come to Herodotus, the father of history. Of the value of his works as a source very diverse opinions have been and are still held. From him surely much was expected. Born in Halicarnassus, in Caria, B. C. 484, he had associations with the greatest men of his time, and apparently planned his history with skill and care. He desired to tell of the famous events in the struggle between the Greek and the barbarian, and this led him to treat of the causes which led to the Persian war. In the very first book (chapters 1–5) he begins with the assaults of the East upon the West by telling the story of the rape

[1] See Gilmore, *op. cit.*, *passim*.

of Helen on the one side and the story of Europa and Medea on the other. From this mythological foundation he is carried first to the Lydians, whose king, Crœsus, made the first attack upon the Greeks of the Ægean coast of Asia Minor. From these he passes to the Egyptians, the Babylonians, and the Scythians, who prepare the way for the Persians. The treatment of each of these several peoples was probably first made in a series of works quite separate in the beginning, and afterward united to form a whole. In the Alexandrian period the work was divided by the grammarians into nine books named for the Muses, but this division ill suits it, and though we do not know how Herodotus himself would have subdivided it, it is quite clear from the casual allusions in various parts of the work[1] that his proposed division did not correspond to this. Herodotus proposed to write a fuller account of the Assyrians, and twice (i, 106, 184) has made reference to this. This was doubtless

[1] The division into nine is already known to Diodorus (xi, 37, 6, Teubner, ed. Vogel, vol. ii, p. 278, Leipzig, 1890), from whom it came to Lucian (*de hist. consecr.* 42. Teubner, ed. Jacobitz, vol. ii, p. 23, Leipzig, 1897). The passages in Herodotus which give references to other parts of his work are especially the following: i, 75, 107, v, 36, and vii, 93.

Opinions differ concerning the value of the division into nine books. Thus Wilhelm Schmid (in Wilhelm von Christ's *Geschichte der Griechischen Litteratur*, Theil i, p. 464, footnote 9. Sechste Auflage, Munich, 1912) refers to it as "die sehr unsachgemässe Einteilung in neun Bücher," and on the other hand J. B. Bury (*The Ancient Greek Historians*, London, 1909, pp. 37, 38) says: "The division into nine books is not due to the author himself, for in his day such divisions had not yet come into fashion. But the Alexandrine editor who was responsible for it was a man of extraordinary insight. His distribution perfectly exhibits the construction of the book and could not be improved by any change."

intended to be introduced into the main work as a digression, as he actually has treated the Libyans, promised (ii, 161) and then inserted at a later point (iv at the end). It is quite probable that the Assyrian history was never written, for he made other promises that remained unfulfilled, and in this at least has been successfully imitated by modern historians in many lands. The work of Herodotus, as it has come down to us, divides naturally into three main parts. The first is mainly concerned with Asia, including Egypt, and covers the reigns of Cyrus and Cambyses, with the accession of Darius; the second deals with Europe, and the third with Hellas. It is highly probable that this third part, now divided into books six to nine, was first written, and the six which precede them were written as an introduction to the main story. When he had completed these last three books he is said to have recited them at Athens, whereupon the Athenians bestowed upon him ten talents (about twelve thousand dollars),[1] which they well might do, for none other had ever so honored their city. It was then that he turned to the great task of preparing the *Logoi* or stories of the other peoples who prepared the way for this, the main part of his history. His position was very different from the modern historian, for he could learn very little from

[1] Plutarch, *De Herodoti malignitate* 26. Plutarchi Moralia, ed Bernardakis v, 229. Teubner, Leipzig, 1893.

books. He seems, indeed, to have used the *Logographoi* to a certain extent, and among them quite certainly Hecatæus, and probably Xanthus, and Hellanicus, and possibly also Dionysius. From them he had to turn to see what might be learned from visits to the countries which he was to describe, and whose story he was to tell. His first long journey was probably to Pontus, and the interior of Asia Minor, and this was probably undertaken before 445, while he was still a subject of the Persian king. His next great journey was to Phœnicia and southern Syria; for this journey we have the definite statement of his arrival in Tyre by sea (ii, 44). From there he went southward, along the coast or always near it, to Gaza and the very confines of Egypt at Pelusium, and from there he entered Egypt. Before this journey along the coast he had made the great voyage into the heart of ancient kingdoms, starting from Tyre, or from Poseidon on the coast farther north. From this he probably reached the Euphrates and went southward to Babylon upon its waters. So much seems reasonably certain. Whether he now pushed on to Susa or not is perhaps doubtful, yet with many elements of probability. He probably returned to the coast as he had come, making the journey up the river Euphrates by land.[1] After this he entered Egypt by land

[1] On the journeys of Herodotus in Asia see H. Matzat, *Ueber die Glaubwürdigkeit der geographischen Angaben Herodots über Asien.* Hermes, vi, p. 392, ff. Berlin, 1872.

from Asia, and went up the river as far as Elephantine.[1] He was in the land in the time of great inundation and probably from July to October, and at some year between 445 and 432 B. C. His guide was Hecatæus, whose book must have been in his hand as he journeyed.[2]

Professor Sayce has attempted to prove, with much learning and great acuteness, that "he never visited Assyria and Babylonia,"[3] and asserts that "he stands convicted of never having visited the district he undertakes to describe,"[4] and concludes with the statement that "the long controversy which has raged over the credibility of Herodotus has thus been brought to an end by the discoveries of recent years."[5] That Professor Sayce has proved upon Herodotus a host of inaccuracies, some travelers' tales, and has effectually disposed of his claims to rank as an

[1] On the journeys of Herodotus in Egypt see A. v. Gutschmid, *Kleine Schriften*, i, 70, ff. Leipzig, 1889. A. H. Sayce, *The Season and Extent of the travels of Herodotus in Egypt. Journal of Philology*, vol. xiv, 1885, pp. 257–286, who argues that Herodotus did not go further south than the Fayum. This is answered in a bitingly sharp, and much too personal article by D. D. Heath, *Herodotus in Egypt, Journal of Philology*, xv, 1886, pp. 215–240. For an exhaustive review of the whole question see Camille Sourdille, *La Durée et l'étendue du Voyage d'Hérodote en Égypte*, Paris, 1910, and compare the excellent summary of fact and evidence by J. Wells in How & Wells, *A Commentary on Herodotus*, i, p. 411, f. Oxford, 1912.

[2] So Bury, *The Ancient Greek Historians*, pp. 49, 50. The sorry fragments of the once great book of Hecatæus, the famous *Terræ Circuitus* or Map of the World, are assembled in Müller, *Fragmenta Historicorum Græcorum*, i, pp. 1–31. Paris, 1841. On some further obligations of Herodotus to Hecatæus see J. V. Prasek, *Hekataios als Herodot's Quelle zur Geschichte Vorderasiens. Klio.* iv, 1904, p. 193, ff.

[3] Sayce, *Ancient Empires of the East*, p. xxviii.

[4] *Ibid.*, p. xxix.

[5] *Ibid.*, p. xxxiii.

independent source of ancient history there can be no doubt. Yet that in this case, as in other similar modern judgments, there is an excess of skepticism is perhaps no less true. There is good reason for believing that Herodotus had really visited Babylon, for the topographical details which he gives bear frequently the stamp of an eyewitness.[1] The monumental remains of Assyrian and Babylonian civilization must be the main sources for the construction of the history. When, however, these fail us, we may well be glad to have his help, and surely none of the monuments may for a moment compare with him as a writer of history. If we, with all our fresh knowledge, were but able to write with his power of perspective, his skill of arrangement, and his perpetual charm of style, it might be hoped that Assyria and Babylonia should live again. He still remains, what Cicero called him, the father of history, though he also was able to recognize that his books contained material that could hardly be called historical.[2] When this is granted quite freely, and the mistakes, inaccuracies, and love of marvels have all been mentioned, we have gone far enough. It were

[1] See, for example, Baumstark in Pauly-Wissowa, *Real Encyclopädie der class. Wissenschaft*, Stuttgart, n. d., col. 2689. "Seine Angaben über B. sind die einzigen unmittelbar und vollständig auf uns gekommenen aus der gesamten griechischen Litteratur vorchristlicher Zeit. Dass sie im wesentlichen auf Augenschein beruhen, wäre besser niemals bestritten worden."

[2] "Et apud Herodotum, patrem historiæ . . . sunt innumerabiles fabulæ," Cicero, De legibus, i, 1.

better not to have doubted his essential veracity, nor to have despised his worth.[1]

After these there remain among classical writers few who deserve to be mentioned as sources. The chronological materials left by some of them, as, for example, the earlier parts of Berossos and the exceedingly valuable Canon of Ptolemy, will have to be estimated later (see Chapter XIII).

Very little else is to be gleaned among the Greek logographoi or historians, and a simple mention only do they deserve. Among the others from whom we have had now and again a grain of wheat may be mentioned these whose names are now set down.

Xanthus, a Lydian who worked under Artaxerxes I (about 465–425), wrote in Greek the Lydiaka in four books. He was the first barbarian to write of his own people in the Greek language, and is supposed to have given inspiration to Herodotus, as also some materials. Only small fragments of his have come down to us,[2] and they of little consequence.

Dinon[3] of Kolophon wrote an extensive book called *Persika* in three great divisions, of which

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[1] For a careful assembling of the valuable references in Herodotus and a comparison of the native sources see J. Nikel, *Herodot und die Keilschriftforschung*, Paderborn, 1896, and add also *Herodotus and the Empires of the East*, based on Nikel's *Herodot und die Keilschriftforschung*, by Herbert Cushing Tolman, Ph.D., and James Henry Stevenson, Ph.D. New York, n. d. (1899).

[2] Müller, *Fragmenta*, i, 36–44.

[3] Müller, *Fragmenta*, ii, 88–95.

the first was devoted to the Assyrians, the second to the Medes, and the third to the Persians, and extending to Artaxerxes III (340 B. C.). He formed a bridge from Ktesias to the fabulous stories of Alexander, and was widely used in antiquity.

Heracleides[1] of Cumae wrote also an extended work called Persika in five books, shortly before the fall of the empire. In the first two books he gave a description of the land and people, and it is much to be regretted that this has disappeared, save for the brief quotations of Athenæus and Plutarch.

[1] Müller, *Fragmenta*, ii, 95–97.

CHAPTER XI

THE LANDS OF BABYLONIA AND ASSYRIA

THE Babylonian and Assyrian peoples had their seat in a great valley with but one distinct and sharp natural boundary. This clear boundary was the Persian Gulf upon the south, which said to all landsmen, "Thus far shalt thou come and no farther." That boundary these peoples respected, and ventured seldom on the troubled and mysterious waters. On the east the boundary between them and their next neighbors was fluctuating and uncertain. The natural boundary would seem to be the mountains of Elam, but these mountains slope gradually westward to the plain, and do not rise precipitously from it. Down these slopes poured hordes of men in all ages, and there was no sharp line of defense to keep them from the valley, while on the other hand the people of the valley were often filled with conquering power sufficient to extend their border far up the slopes into Elam. On the north, also, the boundary was almost equally uncertain. The mountains of Armenia might be regarded as the natural border on the north, but these are intimately connected with the great valley, for they belong to the drainage

system of the Euphrates and the Tigris, and like the mountains of Elam, slope more gently toward the valley than from it toward the heart of Asia. On the north, therefore, as on the east, the lands of Assyria and of Babylonia were open to incursion from the outside, or to raids from within outward. The western border was still more indefinite. In the northwest the valley land swept away in a gentle rise from the Euphrates to the plateau of Aram, and over it even to the Mediterranean; while upon the southwest the desert formed the only barrier between the valley and Arabia or the lands of the Jordan valley. Nomadic peoples passed over this barrier with ease, and became powerful factors in the history of the Babylonians. On the other hand, however, the Babylonians did not readily pass the broad line of the desert.

Within this roughly bounded country two great empires existed for centuries, and the dividing line between them moved up and down the valley as the power of either became stronger than that of the other. Nature had set no boundary between them, for the whole valley lay open from north to south. Yet, though this is true, there have existed from remote times separate provinces in the valley, with more or less definite boundaries between them. If we begin in the south, these separate provinces may thus be described: Close to the Persian Gulf was a small country, the country of the Sea

Lands, the influence of which was marked in the early history of the whole valley. The country of the Sea Lands was entirely alluvial, and small in extent. Through it in early times the Tigris and the Euphrates passed by separate estuaries into the Persian Gulf. Later, though at what time is unknown, the two rivers united and began to flow through one channel into the sea. This alluvial territory is now growing by the river deposits at the rate of about a mile in seventy years, and there is good reason for believing that its average growth in historic time has been not less than a mile in thirty years. If the ratio of increase has been as high as this, the country of the Sea Lands was a very small land during the period 4000–600 B. C. Above it geographically lay the land of the Kaldi, likewise alluvial, and extending northward nearly to the city of Babylon. It has also no line of clear separation from the Sea Lands, nor from Babylonia to the north. As kings from the Kaldi country later ruled in Babylon and had control over the whole vast empire, of which it was the capital, the name of Chaldea was extended by Greek and Roman historians so as to include the whole of Babylonia. Next above the land of the Kaldi was Babylonia itself, which extended northward along the valley, with two exceptions, to the Armenian mountains. These exceptions were the original lands of Assyria and Mesopotamia. Assyria, in its original geograph-

ical and historical sense, was the small triangular-shaped land lying between the Tigris and the Zab Rivers and the Median mountains. When the Assyrians gained in power and numbers they soon extended their dominion beyond these very narrow boundaries, and with their dominion went likewise the geographical name, so that even in early times the name Assyria had been carried westward to the Euphrates and southward as far as Hit, while to the Greeks and Romans it covered the entire valley.[1] The other separate land or province was the great district known popularly as Mesopotamia, a geographical and not a racial or political expression, with boundaries both indefinite and fluctuating. In its widest extent it stretched from the valley of the Orontes on the west to the valley of the Tigris on the east, and from Mount Masius (Karaje Dagh) on the north to the confines of Babylonia on the south, that is, approximately to Hit on the Euphrates. To the Hebrews a portion of rather indefinite extent was known as Aram-Naharaim,[2] usually interpreted as the land

[1] That ἡ Ασσυρία means the whole of the valley, including Babylonia appears from its regular use by Herodotus (for example, i, 178, 185; iii, 92, and iv, 39). It is used in the same manner also by Xenophon (*Cyropædeia*, ii, 1, 5.)

[2] Gen. xxiv, 10; Deut. xxiii, 5. There seems good reason for the view that it ought to be written Aram-Naharim, that is plural not dual. (See W. Max Müller, *Asien und Europa nach altägyptischen Denkmälern*, Leipzig, 1893, pp. 249–255, and compare Budde, *Das Buch der Richter*, on Judg. iii, 8, and Moore on same passage.) In these two passages alone do we gain any useful information concerning the Hebrew notions of Aram-Naharaim. The Genesis passage, which is from J, defines the location of Nahor or of Harran, and the other,

of Aram of the Rivers, or the River Land of Aram; but it is to be remembered that to the Hebrews Aram was not a geographical but a racial name, and that the expression would mean to them rather the River-Land of the Aramæans. To them also it probably extended not much, if any, further east than the river Chabur. A portion of this territory was known to the Egyptians as Nahrina, or Naharin,[1] which has passed over into Phœnicia and Palestine in the form Nahrima, or Narima.[2]

Mesopotamia as used by the Greeks was also a vague designation. Xenophon divides it into two main portions, the western and fertile portion inhabited by agricultural Aramæans extending eastward to the Chabur (Chaboras) and the eastern or desert portion sweeping on to the Tigris. Strabo makes its southern limit the Median Wall, while Pliny quite loosely appears to extend it to the Persian Gulf.[3] In this most unfortunate step Pliny has had a host of followers, and large numbers of modern map-makers so employ the term. It completely destroys the ancient historical nomenclature and

from D, locates Pethor on the west bank of the Euphrates. Both these fall within the limits assigned in the text above. Of the other occurrences of the word the passage in Judges is surely corrupt and should probably be replaced by Edom, and the editorial references in 1 Chron. xix, 6 and Psa. lx, 2 are late and probably come from 2 Samuel.

[1] See Wilhelm Max Müller, *Asien und Europa nach altägyptischen Denkmäler*, p. 251, 252, note 3.

[2] Sina Schiffer, *Die Aramäer*, pp. 56, ff.

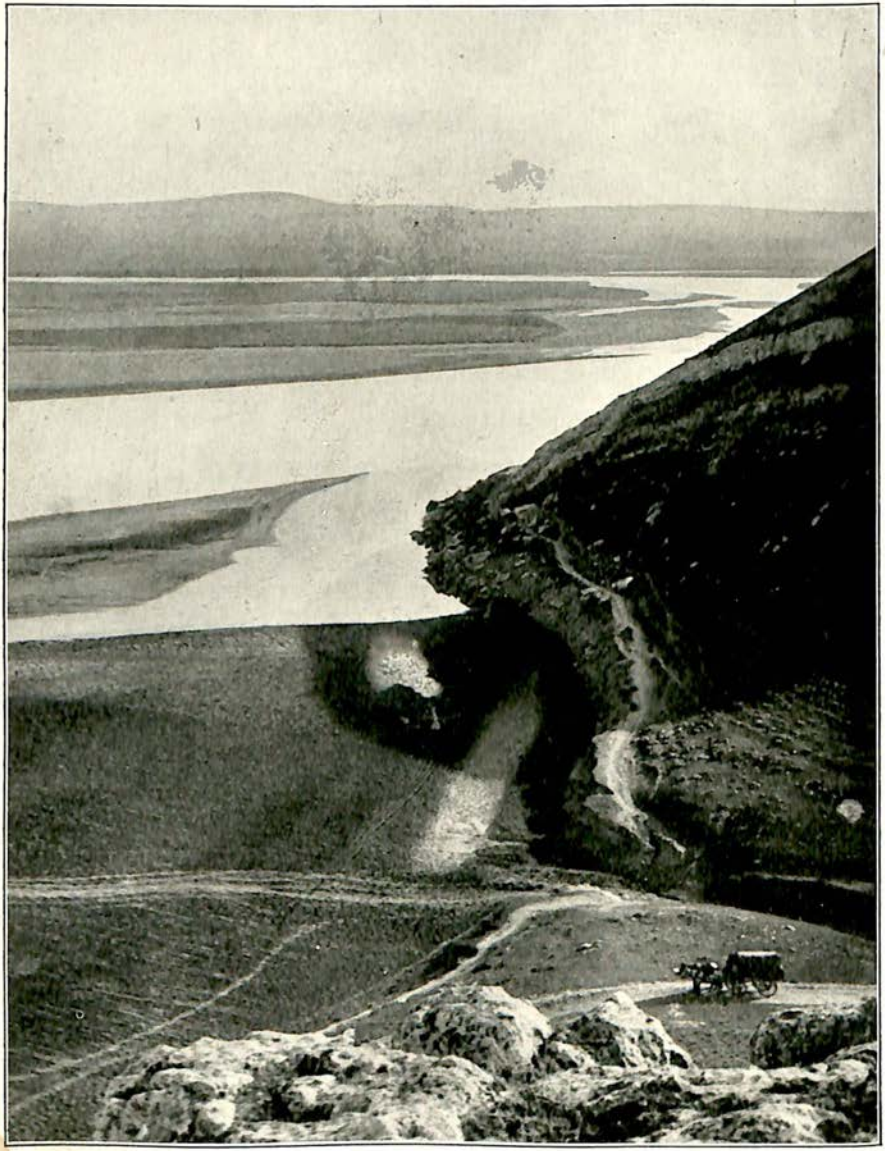
[3] Pliny, *Nat. Hist.* v. 24, § 21. (Teubner, i. p. 397, ed. Mayhoff, 1906.) Strabo, *Geog.* xvi, 746. (Teubner, iii, p. 1040, ed. Meineke, 1898.)

should be abandoned. It would be better if the word Mesopotamia could be confined in modern usage to the river basin drained by the Euphrates, Balikh, and Chabur.

For this country between the Tigris and Euphrates, including Assyria, Mesopotamia, Babylonia, Chaldea, and the Sea Lands, the ancient inhabitants had no general geographical name. The geographical terminology varied with the rise and fall of political power. There were, however, certain clear exceptions to this general rule. For example, the name Assyria was never extended so as to cover Babylonia proper, though it is extended so far westward. On the other hand, the name Babylonia is carried so far north as almost to include Assyria, though the small original land of Assyria appears always to be kept sharply distinguished. The general term of the Assyro-Babylonian valley may properly be used to cover all the country.

Though the word Mesopotamia was never applied by either Assyrians or Babylonians to their country, yet it is in a real sense the product of two rivers, in a sense almost as complete as that Egypt is the product of the Nile.

The Tigris and the Euphrates have their sources upon opposite sides of the same mountain range. This is the highest ridge between the Black Sea and the great valley, and the only one which has peaks bearing perpetual snow—



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First view of the Euphrates in the approach from the Mediterranean via Aleppo.

hence known to the ancient Greeks as the Niphates.

The Euphrates is usually considered as having its origin in the confluence of two rivers, the easterly,[1] known in modern times as the Murad Su, and the westerly the Kara Su, or Blackwater. The former is much the larger and longer river and has claims to be called the Euphrates proper, and is indeed called *Frat* by the natives along its banks. At Ashuk, about thirty miles above the junction with the other branch, variously known as Murad Su, or Palu Su, the river is already about two hundred yards broad and flows swiftly and with a deep red color. At Keban Madan, about 38° 45′ N., the two branches unite and flow in a southwesterly direction to the neighborhood of Malatiyeh, as though to lose itself in the Mediterranean. But at Malatiyeh the course is suddenly changed to the southeast, passing within a few miles of the source of the Tigris at Lake Göljik, thence forcing its way through the mountains in a tortuous course. Thence its course is generally southeast until opposite Baghdad, where it approaches to

[1] The Murad Su is usually called the *easterly* branch, so for example, by Ainsworth, *The Sources of the Euphrates*, *Geographical Journal*, vi, 173 (1895), but Murad Su is certainly the name given by the native inhabitants to the western branch. See Vincent W. Yorke, *A Journey in the Valley of the Upper Euphrates*, *Geographical Journal*, viii, pp. 317, ff. and 453, ff. with map at p. 428, and compare especially the footnote on p. 332 with the quotation from Hogarth, the leader of the expedition. Quite probably Murad is, at times, or by some inhabitants, given to both arms, with local names Kara Su for the western and Palu Su for the eastern.

within twenty miles of the Tigris, and the rivers appear about to form a junction. Both, however, again separate, and only make their final union at last after a very sharp convergence. The estimated length of the Euphrates is seventeen hundred and eighty miles. It is navigable for a distance of twelve hundred miles above its mouth. During its whole course it is an imposing river—among the greatest rivers of the world. Like most mountain streams, its early course is swift and its bed rocky. The first great tributary is the Sajur, received from the right, or west. This is followed by the Balikh, which, in a course of only one hundred and twenty miles, brings the water from Mount Masius. The next is the Khabur, also received from the left, which brings another considerable body of water also from the lower slopes of Mount Masius. From this point, for eight hundred miles until the junction with the Tigris, the Euphrates receives no tributaries whatever. It has been well said that the "upper region of the Euphrates resembles that of the Rhine, while its middle course may be compared with that of the Danube, and its lower with the Nile."[1]

The Tigris is formed by the junction of two small head streams, the eastern rising near Bitlis, not far from the western bank of Lake Van,

[1] Colonel Chesney says, "In some respects the scenery of the Euphrates reminded me of that of parts of the Nile, though far exceeding the latter in picturesque effect" (*Narrative of the Euphrates Expedition*. London, 1868, p. 76).

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The process of sun-dried brick manufacture, near the bank of the Tigris.

while the western comes from the neighborhood of Kharpoot. Unlike the Euphrates, the Tigris receives many important tributaries, which flow down from the Zagros and Elmatine mountains. The first important one of these is the Eastern Khabur, after which in rapid succession follow the Upper Zab, the Lower Zab, the Adhem, and the Diyaleh. This constant accession of fresh water gives the Tigris a character entirely different from the Euphrates. The Euphrates continually decreases in size and flows ever in a more sluggish stream. When it receives the Khabur it is four hundred yards wide and eighteen feet deep; at Irzah or Werdi, seventy-five miles lower down, it is three hundred and fifty yards wide and of the same depth; at Hadiseh, one hundred and forty miles below Werdi, it is three hundred yards wide, and still of the same depth; here its current is four knots per hour in the flood season, but this speed diminishes within the next fifty miles; at Hit, fifty miles below Hadiseh, its width has increased to three hundred and fifty yards, but its depth has been diminished to sixteen feet; at Felujah, seventy-five miles from Hit, the depth is twenty feet, but the width has diminished to two hundred and fifty yards. From this point the contraction is very rapid and striking. The Saklowijeh Canal is given out upon the left, and some way further down the Hindiyeh branches off upon the right, each carrying, when the Eu-

phrates is full, a large body of water. The consequence is that at Hillah, ninety miles below Felujah, the stream is no more than two hundred yards wide and fifteen feet deep; at Diwaniyeh, sixty-five miles farther down, it is only one hundred and sixty yards wide; and at Lamlun, twenty miles below Diwaniyeh, it is reduced to one hundred and twenty yards wide, with a depth of no more than twelve feet. Soon after, however, it begins to recover itself. The water, which left it by the Hindiyeh, returns to it upon the one side, while the Schatt-el-Hai and numerous other branch streams flow in upon the other; but still the Euphrates never recovers itself entirely, nor even approaches in its later course to the standard of its earlier greatness. The channel from Kurnah to El Khitr was found by Colonel Chesney to have "an average width of only two hundred yards, and a depth of about eighteen or nineteen feet, which implies a body of water far inferior to that carried between the junction of the Khabur and Hit."

The Tigris, on the other hand, increases in volume as it proceeds, because of the influx of the tributaries already mentioned, and at Baghdad is two hundred and seventy-five yards wide and very deep. It is a much shorter river than the Euphrates, yet has the great length from source to mouth of about eleven hundred and fifty miles.

The Tigris and the Euphrates have both flood

seasons and carry their waters over a wide extent of country, exactly as the Nile. This fact is so perfectly clear that there can be no doubt concerning it, though Herodotus directly asserts the contrary, saying, "The river does not, as in Egypt, overflow the corn lands of its own accord, but is spread over them by the help of engines."[1] The rise is indeed not so prolonged as the rise of the Nile, but its influence is, nevertheless, distinctly to be seen. The rise in the Tigris is due to the melting of the snows on the mountains, and as it drains the southern slopes, and the Euphrates the northern slopes, the Tigris rises more rapidly. The Tigris usually begins to rise early in March. By the first or second week in May the highest point is reached, and the river then declines rapidly and reaches its level at about the middle of June. As the course of the Tigris during the entire upper part of its course is between banks of considerable height, the river rarely overflows. On its lower course, however, and especially between the thirty-second and thirty-first parallels, it covers a wide extent of country. The inundation of the Euphrates is much more regular and extensive. The melting of snow on the northern slopes is slower, and the river begins to swell very slowly about the beginning of March, and gradually increases until the highest point is reached about the end of May, when the waters stand about

[1] Herodotus, i, 193.

thirteen feet above low water.[1] At this point the river remains, for about a month, sinks slightly toward the middle of July, and then more rapidly till September. The Euphrates begins to overflow its banks much higher up than the Tigris, and even at its junction with the Khabur is described as "spreading over the surrounding country like a sea." From Hit downward the river spreads over both banks, but with a strong tendency to flow farther and more deeply over the western bank. The slow and regular rise of the river made it exceedingly valuable for irrigation, and the Babylonian people fully availed themselves of this great opportunity. Along its banks were constructed brick walls provided with breakwaters to divert and control the swift current at the rise. Sluice gates controlled the rise so that the eastern bank received an inundation equal to the west, while canals almost innumerable diverted the retreating waters, and prevented the flow from damaging the cultivable area. Furthermore, the water was retained in sufficient quantity to supply an irrigation system far back from the river for the grain harvest, after the fall of the river. This entire system is now a vast ruin. The river rises and falls as it wills, and sweeping far over the western bank, turns the country into a morass. The harm of this is both nega-

[1] Colonel Chesney found the increased depth to be thirteen and a half feet (*Expedition for the Survey of the Rivers Euphrates and Tigris.* London, 1850, vol. i, p. 61).

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The River Euphrates, 250 miles northwest of Babylon.

tive and positive. It makes impossible any such great ingathering of grain as existed when this great valley was the world's granary, and it fills the land with breeding places for innumerable insects, which transmit fevers and leave the inhabitants weak and sickly. There are few instances in the world of a sadder waste of a beautiful and fertile country.

In the lower alluvial country the Tigris and Euphrates have made numerous changes in their river beds. These changes have often begun in the spring and summer floods and then continued. The branch streams which are thus formed perpetually vary, being sometimes so large as to be navigable and again left absolutely dry. Yet, on the whole, with the exception of the great change produced by the union of the Tigris and Euphrates at their mouths, the general course of the rivers remains about the same throughout the historic period.

Of the changes in branch streams by far the most important are on the side of Arabia. There branches off near Hit a wide, deep channel, which skirts the Arabian rocks and passes into the Persian Gulf by an entirely distinct channel. This conveys a considerable body of Euphrates water, and keeps back the encroachment of the desert, thus extending considerably the arable part of Chaldea and the Sea Lands. There is some doubt as to its age, and as to whether or not it was in the beginning partly or wholly artificial.

The Tigris, during the major part of its course, is confined within banks high and strong enough to keep the swiftly-flowing waters from changing its channel to any appreciable extent, and it still flows in a channel differing little, in all probability, from that occupied during most of historic time. To this there is the exception that during the Middle Ages the river in its lower course, below Kut el Amara, flowed not in its present channel, but rather through the Shatt-el-Hai into the vast swamp, more than two hundred miles long, which extended southward below Kurna.

The Euphrates, on the other hand, has made a most marked change in its lower course since the Babylonian period, and of this the present topographical situation, as well as numerous documentary allusions in the Babylonian texts, give abundant evidence. The river in its lower course has probably usually had more than one bed, as indeed it still has, and this makes it difficult to determine just which one may have been the chief and which the subordinate channel in ancient times. Some of the ancient courses are, however, pretty clear, and differ much from the present chief channel. The mound of Abu Habba, the ancient Sippar, is now nearly six miles from the river, but it was originally on the river, which is called the "river of Sippar" in the ideographic[1] script of early days. Similarly Kish

[1] Sippar is ideographically written UD-KIB-NUN-KI and the Euphrates

(the modern El Ohemir) is known[1] to have been on a branch of the river, if not upon the main stream, though now it is situated seven and a half miles from the river.[2] Shurippak, or Shuruppak (modern Fara), is described in the Deluge Story of the Gilgamesh Epic as "the city which lies on the bank of the Euphrates." The mound lies now on the eastern bank of the Shatt-el-Kar,[3] and the Euphrates is far away. The river quite probably in ancient times reached the gulf through two or perhaps three[4] mouths, and upon one of these channels Larsa and Ur were certainly situated, for Hammurapi orders the clearing out of the Euphrates from Larsa as far as Ur.

Besides the two rivers neither Assyria nor Babylonia has any supplies of water beyond one single fresh-water lake, on the Arabian side of the Euphrates fifty miles south of the ruins of Babylon, and twenty-five or thirty miles from the river. It does not appear to have been well known or counted of importance by the ancient inhabitants, for no mention of it has yet been

below Sippara, e. g. at Nippur, is called *Naru* UD-KIB-NUN-KI, i. e. the river of Sippar. See Clay, *Business Documents of Murashu Sons*, ix, p. 76, and also in x, p. 70. Compare Fisher, *Excavations at Nippur*, p. 7.

[1] Samsuiluna is said on a contract tablet of his reign to have constructed "the wall of Kish on the bank of the Euphrates." See Thureau-Dangin, *L'emplacement du Kish*, *Orientalistische Literaturzeitung*, xii, 1909, col. 205.

[2] Ker Porter, *Travels*, ii, p. 391, and plan plate LXXIV.

[3] See map by Andrae, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 16, 1903.

[4] Fisher, *Excavations at Nippur*, i, p. 3, makes three, and King, *Sumer and Akkad*, i, p. 380, agrees, but the evidence is not quite conclusive, though this deduction is probable.

found in any Assyrian or Babylonian texts; it was known to the Romans as *Assyrium Stagnum*, and is now called Bahr-i-Nedjif. It lies in a basin forty miles long and from ten to twenty miles broad, inclosed on three sides by limestone hills varying from twenty to two hundred feet in height. On the remaining side there is a ridge of rock which separates it from the Euphrates basin. At the season of the inundation the Euphrates pours water into this lake and then it appears to be a part of the inundation. The water is then sweet and good. When the river returns to its original level the lake remains with but very slight change in volume, but the water becomes so disagreeable as to be unpotable. It has been supposed that this may be due to its connection with rocks of the gypsiferous series.

The great valley has a climate which appears little fitted to produce men of energy and force, for the temperature over its entire surface is very high in the summer season. In the far south, along the Persian Gulf, and in the near-by regions, the atmosphere is moist and the heat is of the same character as that of Hindustan or Ceylon. Records do not exist to show the range of the thermometer, but the passing traveler states the simple fact that the temperature is higher than at Baghdad. In Baghdad the average maximum daily temperature indoors during June and July is set down as 107° Fahrenheit,

and it often goes up to 120° or 122°.[1] At present this high temperature is also reached in the north as far up at least as Mosul. It is now also rendered much more oppressive by hot winds, which arise suddenly and, filled with impalpable sand, drive about in eddying circles or sweep in vast clouds over a wide extent of country. This dust becomes at times so thick as completely to shut off near objects from the vision, as though by a fog. The gleaming particles of sand shine beneath the sweltering sun, the sand enters nostrils or mouth and seems to choke the very lungs. Death itself sometimes alone terminates the suffering experienced in these terrible visitations. It is, however, altogether probable that in the period of the ancient history neither the heat nor the sand was such a menace.[2] Then the whole land in the south was one vast network of canals. The presence of the body of water thus everywhere spread abroad greatly modified the temperature, so that the sudden change which now exists from the heat of the day to the cool of the night could not have been so great. Besides this these canals made the land a cultivated garden, free almost entirely from the incursion of yellow sand.

[1] *The Bedouins of the Euphrates*, by Lady Anne Blunt, ii, p. 278. "In July, 1889, the average daily maximum temperature at Baghdad was 114° in the shade, and in 1890 we encountered the same temperature more than once in June." Peters, *Nippur*, ii, p. 310.

[2] The reference here is to the period of Babylonian occupation. That great heat was experienced in the Greco-Roman period is well evidenced. See, for example, Theophr., *de vent.*, 25, and Plutarch, Alexander, 35.

These sands properly belong to the Arabian desert, from which they yearly come in increasing quantities into the plain and valley. During the period of the glory of Babylon these sand waves had certainly not gone beyond the Euphrates, and they could hardly have reached it. At present from May to November the sky is usually without a single cloud. In November the clouds gather, and in December and January there are heavy rains. These flow rapidly off into the rivers, for there is no canal system to retain the water for use in agriculture. There is no cold weather in all the land in the sense understood in the temperate zone. There is in midwinter an occasional sign of frost, sufficient to whiten the dew upon the grass in early morning, and in rare cases ice has been known to form in the marshes. So mild, indeed, are the winters that Persian kings made Babylon their winter residence to avoid the bitter cold of their own highlands. In recent times native Indians, expelled for state reasons from their own country, fix their residence in Bassorah or Baghdad to enjoy the mild winter climate.

The whole alluvial plain of Babylonia was proverbially fertile in the ancient world. Herodotus began the chorus of praise in the west, and it has continued with greater or less emphasis down the ages. He begins his praise in the oft-quoted words: "Of all countries that we know, there is none that is so fruitful in grain. It

makes no pretension, indeed, of growing the fig, the olive, the vine, or any other tree of the kind; but in grain it is so fruitful as to yield commonly two hundredfold, and when the production is at the greatest, even three hundredfold. The blade of the wheat plant and of the barley plant is often four fingers in breadth. As for the millet and the sesame, I shall not say to what height they grow, though within my own knowledge; for I am not ignorant that what I have already written concerning the fruitfulness of Babylonia must seem incredible to those who have not visited the country."[1] The same note exactly is struck by Theophrastus in his statement: "In Babylon the wheat fields are regularly mown twice, and then fed off with beasts to keep down the luxuriance of the leaf; otherwise the plant does not run to ear. When this is done the return in lands that are badly cultivated is fiftyfold; while in those that are well farmed it is a hundredfold."[2] Strabo follows in the same strain, saying: "The country produces barley on a scale not known elsewhere, for the return is said to be three hundredfold. All other wants are supplied by the palm, which furnishes not only bread, but wine, vinegar, honey, and meal;"[3] and Pliny says that the wheat crop, where the land is well farmed, is a hundred and fiftyfold.

[1] Herodotus, i, 193.

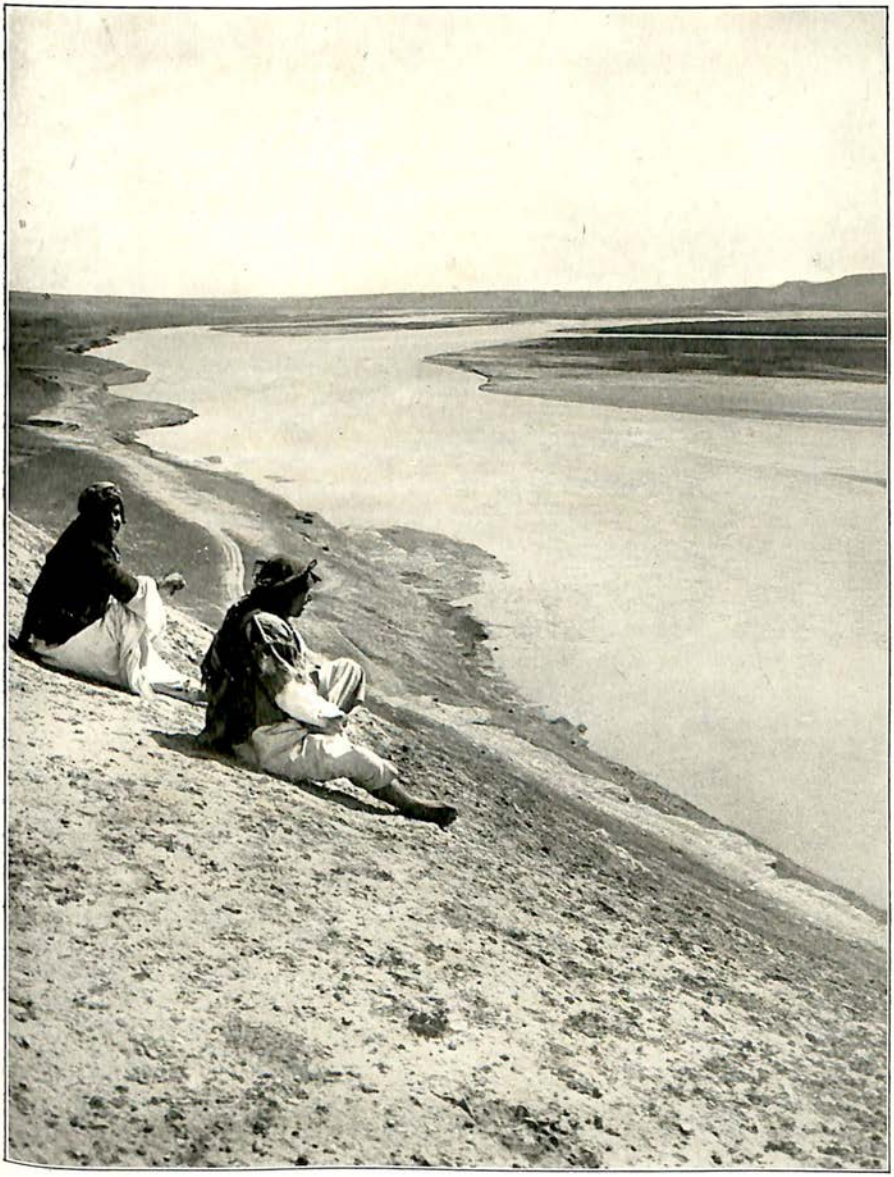
[2] Theophrastus, *Historia Plantarum*, viii, 7 (ed. Fredericus Wimmer, p. 135, line 2, ff.).

[3] xvi, p. 742 (ed. Carolus Müllerus, p. 632, line 26, ff.).

In estimating these tributes to the productiveness of the land it is perhaps well to remember that Herodotus had an affluent imagination and was inclined to exaggerate for effect. Theophrastus is more reliable when speaking of such matters, but probably leaned somewhat on the tradition of Herodotus. The other statements must be exaggerations. To the modern husbandman in this valley the yield of wheat and barley is from thirty to fortyfold. When all allowance is made for the poor methods now followed, and for changed conditions, it is still unlikely that the ancient average yield greatly exceeded sixtyfold.

Modern travelers hardly equal the ancient in their estimate of the fertility of the soil, especially when compared with that of Egypt. Rich, who was a most careful observer and accurate reporter, says, "The soil is extremely fertile, producing great quantities of rice, oats, and grain of different kinds, though it is not cultivated to above half the degree of which it is susceptible." Chesney, who knew the land from much experience during survey work, is even more strong in the statement: "Although greatly changed by the neglect of man, those portions of Mesopotamia which are still cultivated, as the country about Hillah, show that the region has all the fertility ascribed to it by Herodotus." Loftus adds to this the comparative statement that "the soil is not less bountiful than that on

The River Euphrates, south of Babylon.



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the banks of the Egyptian Nile."[1] This statement is, however, of very slight value indeed, for when it was written Loftus had never been in Egypt. Probably the soundest modern estimate is that of Olivier, who knew both Egypt and Babylonia, and adjudged the former to be somewhat more fertile than the latter.[2]

It is commonly believed that wheat and barley are indigenous[3] to the plains of the Euphrates, and that thence, after a period of cultivation, they spread westward over Syria and Egypt and on to Europe. If this be true, the land might well be expected to yield a good harvest of native cereals.

But the productivity of the land did not stop with the great cereals. The inhabitants had a wide range of vegetables for food, among which are pumpkins, kidney-beans, onions, vetches, egg plants, cucumbers, "gombo" lentils, chick-peas, and beans.

Above the vegetables and cereals of the land rose its trees, of which the variety was great, both of those that yielded fruit and of those that added merely to the beauty of the land; among these were the apple, fig, apricot, pistachio, vine, almond, walnut, cypress, tamarisk, plane tree, and acacia. But valuable and beautiful though they all were, none was equal in utility, in song,

[1] *Travels and Researches in Chaldaea*, p. 14.

[2] Olivier, *Voyage dans l'Empire Othoman*, etc., ii, p. 423.

[3] See Alphonse de Candolle, *Origin of Cultivated Plants*. London, 1884, p. 354, f.

or in story with the palm. From the most ancient of days down to the present all the Orient has rung with the praises of the palm. In Babylon it found a suitable place for its development, and it was cultivated with extreme care. Even in early times the process of reproduction had been discovered, and was facilitated by shaking the flowers of the male palm over those of the female. From the products of this tree the peasantry were able almost to support life. The fruit was eaten both fresh and dry, forming in the latter case almost a sweetmeat. If decapitated, the tree gave a juice which might be used as a wine, and was "sweet and headachy," in the opinion of Xenophon. The Greeks even assert that the Babylonians derived from the palm bread, wine, vinegar, honey, groats, string and ropes of all kinds, firing, and a mash for fattening cattle.

The fauna of the land was as rich and as varied as its flora. The rivers swarmed with fish. In their slow-flowing waters the barbel and carp grew to large size and were most highly esteemed. But the eel, murena, silurus, and gurnard were also used for food, and found in abundance.

By the waters and amid the great reeds which almost seemed to wall in the rivers were birds in extraordinary variety, among them pelicans, cranes, storks, herons, gulls, ducks, swans, and geese. On land were found the ostrich, the

bustard, partridge, thrush, blackbird, ortolan, turtledove, and pigeon, together with birds of prey like eagles and hawks. A few snakes are found, of which only three varieties are known to be poisonous, but none of these are so dangerous as many found in adjoining lands.

The larger animals were numerous, but of all the varieties that existed wild only the ox, ass, goat, and sheep were domesticated at an early period and made useful to man. To these were added the domestic hog, which seems, however, to have remained in a semi-wild state. In a later period the horse and camel were brought into use.

But if the domesticated animals were comparatively few, the wild animals were of extraordinary number. At the head of all of them, in the estimation of the Assyrians and Babylonians, stood the lion. He is not so fierce as his namesake of Africa. In size he is not much larger than a Saint Bernard dog, and his Assyrian name originally meant big dog. The modern representative in the same regions is not deemed formidable by Europeans, for he never attacks men save when brought to bay in a position from which there is absolutely no chance of escape, when he will fight desperately. The natives, however, hold them in dread, and never make a fight against one which may be seen in the very act of slaying sheep. There are two varieties, one without a mane and the other with a mane of thick, tangled black hair. It is

the latter which excites most fear in the native breast. The Assyrian and Babylonian kings hunted lions in the chase, and made great boast of the number that they had slain. The chase of the lion was, indeed, the royal sport, and fills a large share of the numerous monumental illustrations of hunting.

In very early times the elephant wandered at will over the middle Euphrates country, but it disappeared certainly before the thirteenth century, and was henceforward only an object of curiosity, when received by kings as presents in distant wars. Like the elephant, other beasts of chase or prey early disappeared, or ceased to be objects of interest because of their rarity. Among these were the urus, leopard, lynx, wild-cat, hyena, porcupine, beaver, and the ibex. During at least a large part of the history the wild ass and onager roamed in small herds over much of the country and especially between the Balikh and the Tigris. The beauty and swiftness of the wild ass have long been celebrated in the Orient, and the Assyrians admired and represented them in their monuments. It appears that they attempted to tame them for the drawing of chariots, but met with poor success. Modern attempts to make them serviceable have been equally futile. The natives frequently capture foals and rear them on milk in the tent. They become docile and affectionate, but are delicate in captivity and useless for labor. Two varieties of

deer appear in monumental representation, the one apparently representing the gray deer, which still exists in the country, and the other, the fallow deer, which is now entirely unknown. The hare, also, is frequently exhibited as the object of chase.

While both Babylonia and Assyria were exceedingly rich in flora and fauna, they are both, and especially the former, exceedingly poor in mineral wealth. The alluvium is absolutely destitute of metals and of stone. This had an important reflex influence upon the civilization of the country. As stone was not procurable close at hand, the early builders who would have it for utility or decoration sought it at great distances. From Arabia came probably the earliest stone utilized in the country. This had to be transported long distances overland. The skill required for this in the overcoming of engineering difficulties pushed forward the development of the people in mechanical pursuits, and hence reacted upon civilization. But even as early as 3000 B. C. stone was brought from the Lebanon and the Amanus. This was rafted down the Euphrates, after a considerable land journey to its upper waters. And herein was cause for the study of problems in river transportation and in the construction of navigable rafts. Such problems as these would be insoluble by natives in the same district at present, but they were successfully carried out on a large

scale in early times, as the great buildings and the inscriptions describing them abundantly witness. But, though the Babylonians did thus acquire stone, they could hardly have secured enough to house the entire population as well as for royal residences and the homes of the gods. The need for a permanent and less costly building material was solved in another way. There was beneath their feet an inexhaustible supply of the best qualities of clay. This was readily molded into bricks. Some of these were dried in the sun, and were then deemed sufficient for the filling in of the interior of walls. Others were baked in kilns, and with these the walls were faced. In the excellence of materials used, and in the perfection of form, texture, and solidity, and in the great size of their bricks the Babylonians have probably never been excelled. The same material was used for the manufacture of books or tablets. These were made even more carefully, and were almost indestructible. For records the ancient world knew nothing their superior and perhaps nothing equal. The papyrus of ancient Egypt was so fragile and so easily destroyed by either fire or water that it bears no comparison with the brick which resisted both almost equally well. The clay tablet has preserved through the centuries a vast literature, much of it uninjured, while untold portions of the literature of the more cultured Egyptians have hopelessly perished.

In the erection of buildings the bricks were joined together in three different ways. They are found simply set together in the interior of walls, without any substance to form a close junction. More commonly they were united by bitumen, which was found in several parts of the country, but especially at Hit. Here are inexhaustible springs which have supplied the whole surrounding country for untold centuries, and form the subject of repeated references in the literature not only of Babylonia, but of Egypt, Greece, and Rome as well.[1] Slime and mud were also used, and with these calcareous earths appear to have been mixed, the whole forming a solid and extremely tenacious mortar.

From the bitumen pits petroleum is now taken, and may have been known to the ancients. But here ends the very brief catalogue of the mineral product of Babylonia. The land could hardly be poorer in this respect.

In mineral wealth Assyria was incomparably superior to Babylonia. Stone of excellent quality, and in many varieties, such as limestone, conglomerate, and sandstone, is found on every hand, while other stones were easily accessible. A soft and beautiful alabaster, readily cut into slabs, abounds on the eastern banks of the Tigris. This beautiful material was extensively

[1] See, for example, Herodotus, i, 179; Pliny, *Nat. Hist.*, vi, 129, ff., 152; Strabo, xvi, 743. The pits are described by Chesney (*Narrative of Euphrates Expedition*, p. 280; compare also p. 76) and by Rich (*Narrative of a Journey to the Site of Babylon*, London, 1839, pp. 101, 102).

used for wainscoting in Assyrian palaces, and its outer surfaces were then richly carved in bas-reliefs. The progress thus made in the art of sculpture was noteworthy, and is to be numbered among the greatest triumphs won by this warlike people in the arts of peace. The mountains of Kurdistan, easily reached by the rivers or water courses above the great cities, supplied many beautiful forms of marble; while Mount Masius offered a fine quality of dark-colored basalt of great fineness and hardness. These stones were indeed not used for the walls of buildings. The colonists of Assyria retained the custom of Babylonia, from which they had come, and built their houses, temples, and palaces of brick, and later ages continued to follow their example. Like Babylonia, Assyria had extensive bitumen pits, located at Kerkuk,[1] in the territory between the Lesser Zab and the Adhem, while another source is found in the bed of the Shor-Derreh torrent, near Nimroud. Salt is also obtainable in the former district.

The lands which were thus rich in flora and fauna and sufficiently supplied with minerals for man's ordinary use maintained a great population, largely settled in cities, in which the real political life of the land began. The cities which

[1] See Ainsworth, "Journey to Constantinople," in Chesney's *Narrative of Euphrates Expedition*, p. 497: "There are several wells from which considerable quantities of naphtha and petroleum are obtained. From eight to ten gallons were said to be collected from each well per diem."

play important parts in the later history may here be set down, with just enough of color and description to make them real in the story of their political life.

In the far south lay the city of Eridu, which played but a small part in all the history of Babylonia, unless indeed it had importance in a period still more ancient than that known to us. The site is now known as Abu-Shahrein,[1] and has not yet been adequately studied. The remains of the city, so far as they have been excavated, appear to contain a large temple, which was probably the home of the god Enki, god of the deep, and the Sumerian prototype of the god Ea. The city did not lie in the valley of the Euphrates, from which it is separated by a sandstone ridge with a pebbly beach. To this the sea must have extended in early times, before the alluvial deposits had driven the coast line away to the south. The early inscriptions speak of Eridu as "on the shore of the sea," and it stood, not upon the alluvium, as the other cities, but upon a rocky base, and its early buildings appear to have been of stone and not of brick, as was everywhere else the usage.

West of Eridu stood the great city Ur, which occupied from the earliest times down to the be-

[1] See Loftus, "Notes on Abu-Shahrein and Tel-el-Lahm," in *Journal of the Royal Asiatic Society*, xiv, pp. 412, ff. "We found . . . . that the name Abu-Shahrein had vanished, and Nowawis taken its place as the present designation of the ancient ruins of Eridu." Peters, *Nippur*, ii, p. 96.

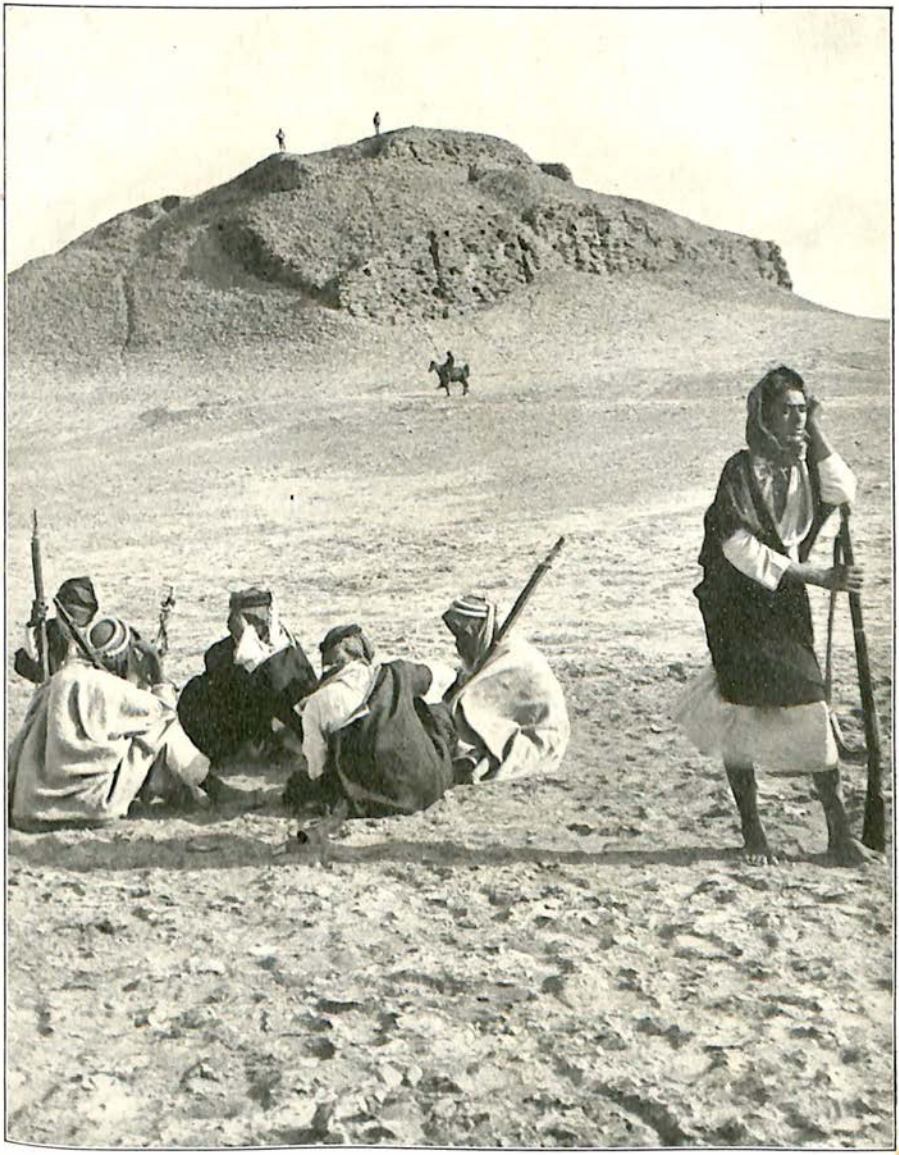
ginning of Babylon's hegemony a position of distinguished influence in the land, and even thereafter continued to be the most important city in the south. The chief god of the city was Sin, the moon god, here worshiped under the name of Nannar. The moon god always exerted profound influence over the minds of the people, and Ur, therefore, was early adorned with a large temple for the worship of Sin, which was frequently restored down the centuries to the days of Nabonidus. The ruins of the city have been but slightly explored, and will amost certainly give a rich treasure, at some future day, to a complete examination of them. The mound is now called El-Mugheir[1]—the place of bitumen—for the inhabitants have used it for centuries as a place to secure bitumen, which they dug from between the bricks of Babylonian buildings.

At the modern town of Senkereh,[2] on the left bank of the Shatt-el-Kar Canal, stood the next chief city, Larsa. This was also one of the most ancient cities of the land. The sun god held the

[1] Loftus, *Travels and Researches in Chaldæa and Susiana*, London, 1857, pp. 127, ff.; Peters, *Nippur*, ii, pp. 196, ff. (with photograph of the Ziggurat).

[2] Loftus, *op. cit.*, p. 256. See especially Sachau, *Am Euphrat und Tigris*, pp. 66–68. Sachau believes that the mound contains not only remains of temples and palaces, but also of the dwellings of the inhabitants. "In diesen babylonischen Städten Senkere und Warkâ scheinen ausser den Tempeln und Palästen auch noch die Wohnungen der Bürger unter dem Schutt erhalten zu sein ähnlich wie in Pompeji, während in Ninive ausser den beiden Königsburgen, Kojunjik und Nebi Jûnus, der Mauer und den Thoren alle übrigen Wohnungen spurlos von der Erdoberfläche verschwunden sind. Aehnliches gilt auch von dem Weichbild von Babylon." *Ibid.*, p. 67.

The Mound of El-Mugheir (Ur of the Chaldees) from the southeast.



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chief position in Larsa, and here the early kings Ur-Gur and Dungi built a temple in his honor. This temple found restorers in Hammurapi, Burnaburiash, Nebuchadrezzar, and Nabonidus, and so remained a venerated spot unto the very end of Babylonian history. The city early played an important political part, and retained its place at the head of a small state, even down to the reign of Hammurapi. It was the last city to succumb to him and yield allegiance to the conquering might of Babylon.

Somewhat north of Larsa, and on the same canal, stood the venerable city of Uruk, the biblical Erech, marked now by the extensive mound Warka.[1] The ruins now lie an hour and a half ride from the present bed of the Euphrates. It must have been nearer to the river in early times, if indeed the Shatt-el-Kar was not one of its chief courses. But we know that as early as the period of Hammurapi the river had forsaken the city, for Hammurapi had to dig a canal to furnish it with "water in abundance." Uruk was a border city between northern and southern Babylonia, and long remained the center of a small independent kingdom. It was the place of worship of the goddess Nana (Ennin) of the Sumerians, with whom the Semitic inhabitants identified their goddess Ishtar. The temple dedicated to the goddess and called E-Anna (house of heaven) was rebuilt by Ur-Engur and by Dungi

[1] For the explorations and excavations on the site, see above p. 330.

and often restored, but by whom it was originally built we do not know. Its origin surely goes back to early Sumerian times. It now forms the ruin of El-Buwarije, while the general mass of ruins is called Warka,[1] which has unhappily not been dug up. The city had independence at an early period, and is coupled by Hebrew tradition[2] with the earliest centers of the land, and Babylonian records go far to prove that this is correct. It was, however, much more than a mere center of power. It was a seat of learning and must have had a library at a very early period. Many books in the library of Ashurbanipal, and especially religious hymns, bear colophons which show that they were copied from originals at Uruk. Strabo adds to this fact the statement that at Orchoë there was a school of Chaldeans, that is, in his use of the word, "astrologists." This would indicate that culture was still resident in this city, though it had vanished from other more ancient centers. And we know quite well that from the days of Alexander the Great the Greeks had regular intercourse with the temple schools in Babylonia, and bore proudly the title Chaldean as a badge of honor.[3]

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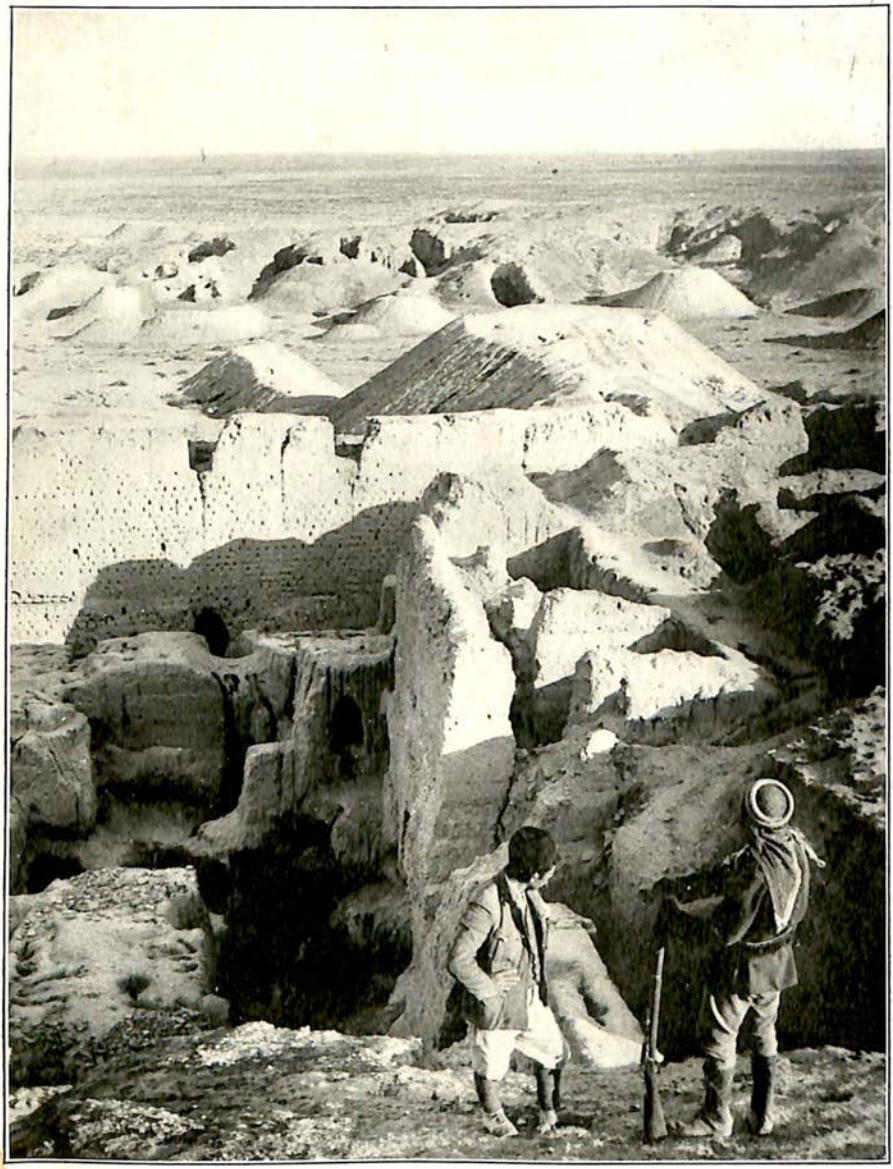
[1] Loftus, *op. cit.*, pp. 159, f. It has been visited by Ward (see Peters, *Nippur*, i, pp. 349, 350) and by Sachau (*op. cit.*, pp. 61–64), who has well described its present appearance. For the later visits to it and the excavations see above, p. 330.

[2] Gen. x, 10.

[3] See the evidence assembled and brilliantly presented in Franz Cumont, *Astrology and Religion among the Greeks and Romans* (New York, 1912), especially in Lecture, ii, Babylonia and Greece.



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Portions of the excavations at Nippur, made by the expeditions of the University of Pennsylvania.

On the banks of the canal Shatt-el-Hai, which unites the Tigris and Euphrates, is a mound Telloh,[1] from which have come vast stores of inscribed tablets of every description. It marks the site of the ancient city of Lagash, which had a long history as a separate state, though with many fluctuations of power.

The city had several divisions, of which the names Girsu, Nina, Uru-azagga, and Uru have been recovered. Girsu seems to have been the most important, for it contained the great temple erected by Ur-Nina to the goddess Ningirsu, whose very name connects her with this quarter of the city. Lagash seems at one time to have borne the name Shirpurla, though the use of this name is not yet quite clear to us.[2]

The next city in our progress northward was Isin, of which, unhappily, very little is known. It was linked in the title of the kings who made Nippur, its near-by neighbor, the chief city of the land, but its history was swallowed up in the greater history of the places about it, and its ruins have not been certainly identified.[3]

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[1] Heuzey-de Sarzec, *Decouvertes en Chaldée, passim;* Peters, *Nippur*, i, pp. 268, 269; ii, 291. The visit by Ward is described in his diary (Peters, *Nippur*, i, pp. 337–339, 342).

[2] The name of the city is expressed by the signs SHIR-PUR-LA (KI) which were read Lagash (see Meissner, *Orientalistische Literatur-Zeitung*, 1907, col. 335). King (*History of Sumer and Akkad*, i, p. 18) suggests that "the place was called Lagash by the Sumerians, and that the signs which can be read as Shirpurla represent a traditional ideographic way of writing the name among the Sumerians themselves," but this seems to be inconclusive, though ingenious.

[3] Peters suggests Bismya as the probable site of Isin (*Nippur*, ii, 272).

Nippur, on the other hand, is now better known than any of these cities which have thus far been mentioned unless it be Lagash. Nippur was the oldest center of the worship of the god Ellil, and may be the oldest city of all Babylonia of which there is any known record. As Ur was the city of the moon god, and Sippara the city of the sun god, so was Nippur the home of Ellil, and as these three were the greatest of the gods of Babylonia, so their cities outranked all others in early political history, until dethroned by force; after which they continued to be the chief places of veneration in all the empire. Nippur was rich in buildings devoted to religion and to royal residence, and its great ruin mound, Niffer or Nuffar, has yielded an extraordinary mass of ancient treasures.

A little further to the north, and between the Shatt-el-Hai and the Shatt-el-Kar lies the mound of Jokha, not yet excavated scientifically, but plundered by the natives, who have sent hundreds of tablets upon the market from which it is learned that the ancient city there buried was known as Umma, long a rival of Larsa and once a city of great importance.[1]

Further to the west, and beyond the Shatt-el-Kar, lay the ancient city of Shurippak or Shuruppak, now covered by the mound of Fara, which

[1] For a visit to the mound see Andrae, *Mitteilungen der Deutschen Orient Gesellschaft*, No. 16, p. 20, f., and for the tablets brought from it and its identification see Scheil, *Recueil de Travaux*, xix, p. 63 and xxi, p. 125.

bears clear marks of some great fire in which the ancient city perished.[1] It was once famous enough to be the reputed home of Ut-napishtim, the hero of the Babylonian deluge.

A short distance north of Shurippak lay Kisurra, now marked by the mound of Abu Hatab, which played its role in the Sumerian period, but disappeared from our ken in the Hammurapi period. Northeast of it, and beyond the Shatt-el-Kar, Adab, now Bismâya,[2] which had a like destiny and fate.

Northwest of Nippur, on the same branch of the Euphrates, if indeed it be not the main stream, lay Kish, now identified in the mound of El-Ohêmir, where the remains of a temple dedicated to the god Zamama still await excavation.[3]

But great as all these cities were in age, and rich though they continued to be in religious associations, they were all surpassed in influence by the city of Babylon. They were forgotten of men when the dust and sand settled upon them, but the glory and the shame of Babylon remained. Even the name of the city lived on in the ruin heap Babil.[4] The chief ruins of Baby-

[1] For excavations on the site see above, p. 319.

[2] For excavations on the site see above, p. 320.

[3] From here Ker Porter brought bricks referring to this temple. See his *Travels*, ii, p. 394 and plate LXXVII, a. and compare I. R. 5, No. xxii. See also Fr. Thureau-Dangin, *L'emplacement de Kish*, *Orientalistische Literaturzeitung*, 1909, col. 204, f.

[4] There has been much doubt about the identification of various mounds near Hillah with the parts of ancient Babylon. There is a learned and exhaustive review of the matter by Baumstarck in Pauly-Wissowa, *Realenc. der class. Allerthumswissenschaft*, ii (1899), and an

lon lie near the modern village of Hillah, and cover such a great extent of country that until very recently no men have been found bold enough to attempt the exploration of the entire mound. The city laid no claim to great age, and was probably not very ancient when Hammurapi made it the chief city over all the land and displaced the more ancient seats of power. The religious glory of the city was also in a sense fictitious. Its chief god had been Marduk (the biblical Merodach), and to him fitting worship was paid for generations. But Marduk's own position in the pantheon was not great enough to bring to the city a religious primacy, and he was therefore identified with the great god Bel, and under that name was worshiped in Babylon. To him was erected a great temple in pyramidal form rising to seven stories, and known as E-sagila. Kings vied with each other to make this the largest and most beautiful shrine in the empire, and in it all rulers must needs "take the hands of Bel" before their authority was deemed valid. So came the city to possess political power, dominion over the hearts and consciences of men, and wealth unapproachable. To Babylon in the days of Nabonidus was joined another city, Borsippa, which

outline of the problems by Rogers in the *Jewish Encyclopædia, sub voce*. The mounds are well described by Peters (*Nippur*, i, pp. 212; ii, 53) and by Sachau (*op. cit.*, pp. 37, ff.). For a discussion of the site as the excavations of the Deutsche Orient-Gesellschaft have revealed it see above, pp. 313, ff., and compare especially Robert Koldewey, *Das wieder erstehende Babylon*. Leipzig, 1913.

Excavations on the mound El-Kasr, Babylon. In this mound were found the remains of the great street, built by Nebuchadrezzar for the procession of the god Marduk, in it also the magnificent Ishtar gateway. Near this gateway stood the Ninmach temple. Here also probably stood the great complex of vaulted structures which were described among the Greeks as the "hanging gardens."

Here also was the vast Throne Room of the Babylonian kings, with its façade richly decorated in blue and yellow enameled bricks. In this room Hebrew tradition located, probably, the feast of Belshazzar. Not far away are the remains of the palace of Nabopolassar and portions of the wall Imgur-Bel.

On the left, in the picture, is visible the black basalt lion, probably from the time of Nebuchadrezzar.

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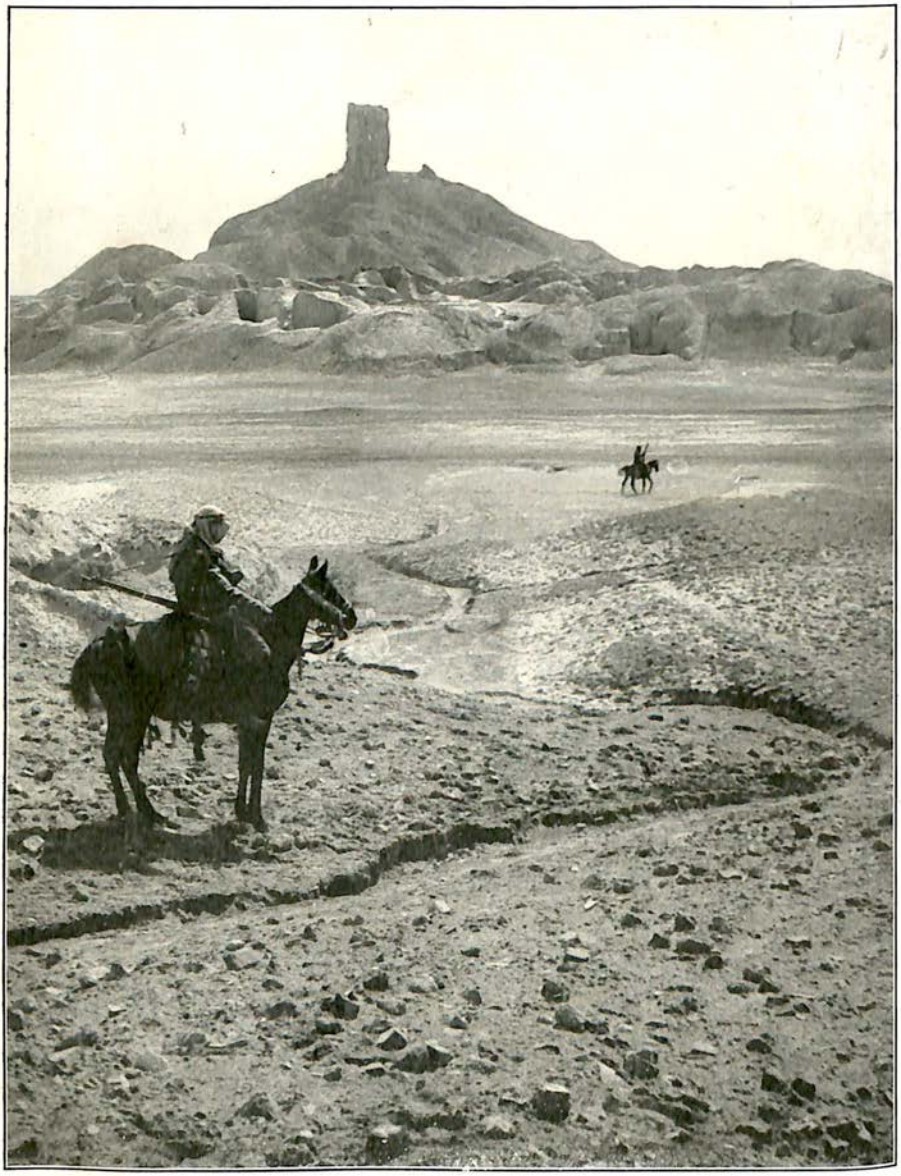

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The Mound of Birs Nimroud, containing the ruins of the city of Borsippa, with the temple of E-zida dedicated to the god Nabu (the biblical Nebo).

may have been as old as the capital itself. In it stood the temple of E-zida, now Birs Nimroud,[1] dedicated to Nabu (the biblical Nebo), on which kings lavished almost as much labor and wealth as upon E-sagila. The two cities were linked also in their religious festivals, for on the first day of Nisan (March–April), the beginning of a new year, the god Nabu left his temple in solemn procession to visit his father, Marduk, in Babylon. Of so great importance was this festival that the king was required to share in it, no matter where he might be at the time, whether on business or pleasure bent, under the penalty of forfeiting for the coming year the title of king of Babylon. It is easy to see that this gave enormous power to the priesthood, for it was they alone who represented these great deities in the eyes of all the people.

The city of Babylon lay chiefly on the east bank of the river, though it crossed also over the stream to occupy also the west bank. The wall defences inclosed an area of about eight square miles. How the Greek authorities managed to exaggerate so greatly the extent of the walls does not readily appear. Ctesias[2] makes them extend three hundred and sixty stades, Strabo[3] three hundred and sixty-five; these would make

[1] Oppert, *Expedition en Mesopotamie*, i, pp. 200, ff.; Peters, *op. cit.*, i, pp. 213, ff.

[2] In Diodorus Siculus, ii, 7, 3 (Teubner, ed. Vogel, Leipzig, 1888, i, p. 181).

[3] Strabo, c. 738 (Teubner, ed. Meineke, Leipzig, 1898, p. 1028).

the compass of the walls more than forty-one miles, while Herodotus[1] makes them four hundred and eighty stades, or fifty-five and one quarter miles. All these are quite impossible as measures of the circuit of the walls, as excavation has revealed them. It has often been suggested that the city may have enfolded a number of smaller cities and villages within a compass of fortifications that might have extended to a great distance, but for this there is no evidence either in the literature or in the site itself.

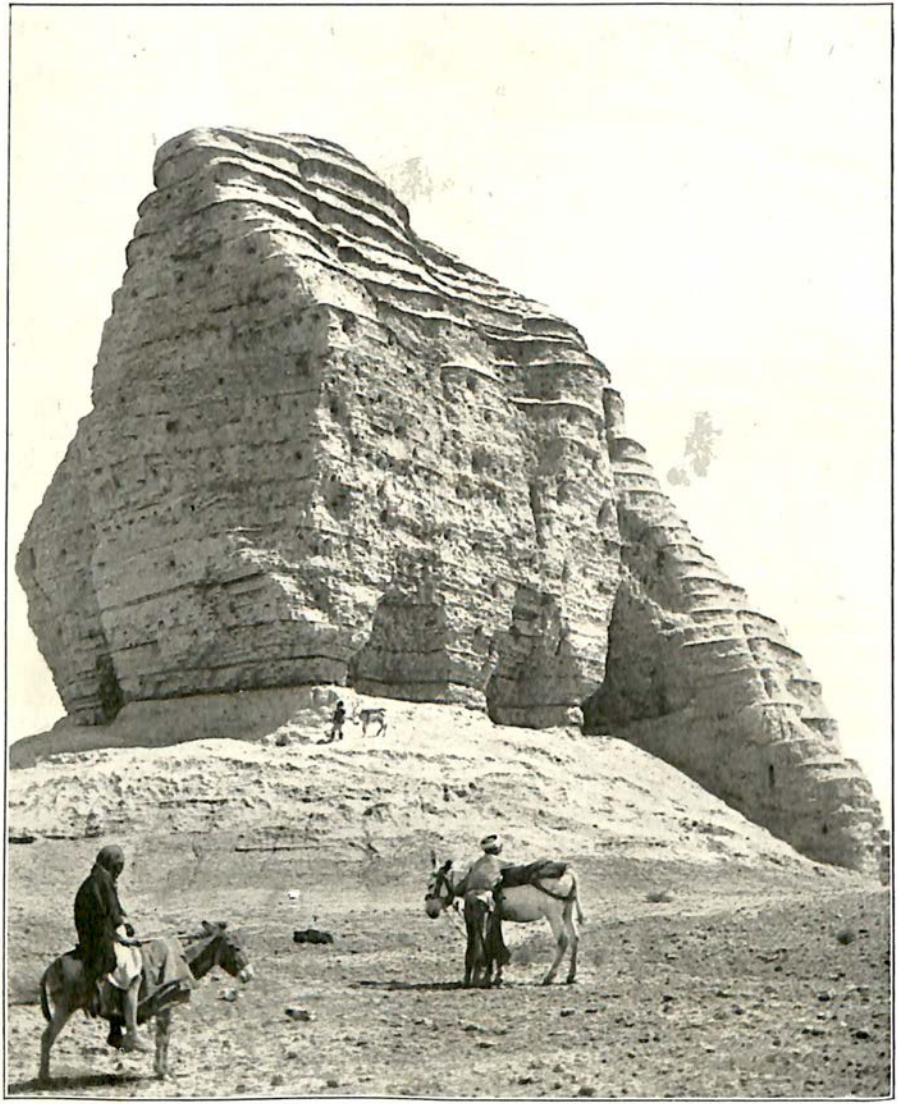
Five hours (about fifteen miles) northeast of Babylon lay Kutha, now a mound and village called Tell-Ibrahim,[2] once the leading city of northern Babylonia before the rise of the city of Babylon. The chief god of the city was Nergal, whose temple was called E-shid-lam, at which passing kings were wont to pay honors and offer sacrifices. From Kutha a profound influence passed into the world's history by the act of one of the Assyrian kings. Sargon deported thence a number of inhabitants to Samaria on the fall of the northern kingdom of Israel, who introduced the worship of Nergal and then engrafted upon it features derived from the religion of Jehovah. In close relation with Kutha stood the near-by city of Kish, somewhat as Borsippa stood to Babylon.

[1] i, ch. 178–187.

[2] Rassam, *Asshur and the Land of Nimrod.* New York, 1897, p. 396.

Reconstruction of the Peribolos, with the Tower of Babylon, the temple of Esagila, the river wall of Nabonidus, and the bridge over the Euphrates. The tower is shown incomplete.

[Reproduced from Koldewey, *Das wieder erstehende Babylon*, Leipzig, 1913, by permission of Professor Delitzsch of the Deutsche Orient Gesellschaft and the J. C. Hinrichs'sche Buchhandlung.]



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The Mound of Akerkuf, over one hundred feet high, and for many centuries an impressive landmark in the great valley, marking the site of Dur-Kurigalzu (Kurigalzuburg).

In the extreme northern part of Babylonia, and nearly opposite to the present Baghdad, lies the mound Akerkuf,[1] which marks the site of Dur-Kurigalzu (Kurigalzuburg), a city named after a Babylonian king of the Kassite dynasty, and built by him probably on an older site. It was an important city during the Kassite period, and finds then frequent mention in the inscriptions. It had one great temple, but no less than six other temples find mention, though of them we know nothing more. The site, though often visited and described and at times tested here and there by trial trenches, has not been explored.

The cities of Assyria were not so ancient as those of Babylonia, and their general character was commercial rather than religious, military rather than peaceful and culture-loving. Their temples were indeed large and imposing, for the Assyrians had amassed great wealth in war, and they believed, no less than the Babylonians, that the gods had led them to victory. They also boasted great piles devoted to the residence of kings, in which, however, libraries were not so common as in Babylonia.

The first city of Assyria in age was Asshur, whose site is now marked by the mound of Kalah Shergat,[2] on the right bank of the Tigris.

[1] On the mound see Chesney, *Narrative of Euphrates Expedition*, p. 83, and Rich, *Narrative of Journey to the Site of Babylon*, pp. 2, 3.

[2] Rassam, *Asshur and the Land of Nimrod*, pp. 256, 257. Sachau, *op. cit.*, pp. 91, f., and 104, with two illustrations of the mounds. Ains-

It was originally a colony and dependency of Babylonia, but its kings spread their power over the adjoining country, which they named Ashur, after their city. It was the home of the great god Ashur, whose temple, E-kharsag-kurkurra, was erected by the earliest rulers of whom we know anything, and frequently restored by later monarchs. When Calah became the capital of the kingdom Asshur lost its dignity and decreased in size, but retained a certain reverence as the ancient site of the most revered national god, and as the mother city of the kingdom.

A little further north, but on the eastern bank of the Tigris and at its junction with the Upper Zab, Shalmaneser I built the city of Calah, which he made the capital of Assyria. It remained the royal residence down to the age of Sargon. The mound Nimroud[1] marks its site, and this has been fairly but not completely dug over. The city was not an ancient and venerated shrine of any deity, but worship was paid to Ashur in its temple.

A little further up the eastern bank of the Tigris the ruin heaps and squalid villages of Kuyunjik[2] and Neby Yunus mark the site of Nineveh, which Sennacherib made the capital of the empire. The origin of the city is doubtless to be placed far earlier than this time; it is

worth, *Journal of the Geographical Society*, xi, p. 5. See also above pp. 320, ff.

[1] For the excavation see above, p. 197.

[2] For the excavation of the site see above, pp. 188, 192, 193, ff., 207, ff.

enumerated, in the Hebrew tradition, among those founded by Nimrod when he came out of Babylonia, and excavation is likely to show that kings and perhaps even the early patesis had built upon the site. It remained the royal residence down to the age of Sargon, but was completely eclipsed both in size and glory by Nineveh, and in sacred memories was never able to overtake Asshur. The city was not an ancient and venerated seat of any deity, as the Babylonian cities usually were, but in it Ashur, Nabu, Ninib, Sin, Shamash, and doubtless others found reverence. It was natural that Ashur, the god who had made Assyria powerful in war, should have worshipers among the kings who resided in Calah, but the most interesting cult in the city was Nabu's. To him a temple was erected by Adad-nirari III (812–783 B. C.), bearing the name E-zida, the same as Nabu's chief temple in Borsippa, and though Ashur was still worshiped by this king, and Shamash also, a votive statue to Nabu bears the striking inscription: "O posterity trust in Nabu, trust in no other god."[1]

The city was protected by the rivers on two sides, and along the northern side by hills and a long wall with no less than fifty-eight towers, and when this wall was finished and the town rebuilt by Ashurnazirpal it was re-peopled with captives. When it ceased to be the capital it

[1] I. Rawlinson, 35, No. 2, line 12.

did not lose its importance, and among the latest kings of Assyria Ashurbanipal and Ashur-etililani showed honor to it, the former[1] setting up a votive inscription in the temple, and the latter[2] rebuilding the temple of Nabu.

Yet however much they and other kings had wrought in building and decoration on the site of Nineveh, her chief period of glory and power was reached in the period of the Sargonides. The city was, however, much older than this, as it was certainly in existence in the third millennium, for Gudea (circa 2500 B. C.) mentions it by name, and an inscription of Dungi (circa 2400 B. C.) was actually found amid the ruins. It was the center of the worship of Ishtar, who was called Ishtar of Nineveh to distinguish her from Ishtar of Arbela. Ishtar of Nineveh was worshiped in a great temple on which generation after generation lavished extraordinary plunder, and was deservedly known as the "darling of Ishtar." It was the dream of Sennacherib to make Nineveh surpass Babylon in size and magnificence, and, though he did not reach that ideal, he did make it a fine city, second only to the ancient mother city by the Euphrates. To all the world Nineveh stood as the representative city of the hated Assyrian empire, and that made its name a byword among the peoples.

[1] S. A. Smith, *Keilschriftteste Asurbanipals*, pp. 112–114.

[2] I. Rawlinson, 8, No. 3, line 5, ff. See Jastrow, *Religion Babyloniens und Assyriens*, i, p. 238.

The city stood on the left, or eastern, bank of the Tigris, along which it extended about two and a half miles. The southern wall was about one thousand feet only in length, while the northern measured seven thousand feet and the eastern nearly three miles, and the entire city therefore formed an irregular trapezium, through which passed the river Choser, nearly at right angles to the Tigris, into which its waters were discharged. The Choser more than once menaced the city by floods, and this danger was minimized by extensive dams, and by ditches, one of them over two miles long and two hundred feet wide, by which the water could be controlled and diverted into the moats outside the city wall and between the great ramparts on the northeast.

Though the city was thus surrounded by water, it thirsted much for water to drink, as both the Tigris and Choser are unpotable, or at least unpleasant because of salts brought down from the mountains. Long dependent upon the "rains of heaven for drink," the inhabitants were delivered from this bondage and uncertainty by Sennacherib, who brought water from the hills by an aqueduct carried into the city. The same king it was who built the palace beyond compare, half in the Hittite and half in the Assyrian style, whose glory made the city famous.

North of Nineveh, at the foot of the moun-

tains, Sargon planted a new city, to which he gave his own name, Dur-Sharrukin (that is, Sargon'sburg), which he probably designed, not only to make a royal residence, but also the capital of the country and a rival of Nineveh. The remains of the city at Khorsabad[1] were the first Assyrian ruins excavated, and these have shown that he made the city magnificent with many great buildings, of which his royal palace was the chief. It stood upon a platform raised forty-eight feet above the level of the city, and its vast façade measured nine hundred feet in breadth. Its main doorway gave into a court-yard three hundred feet by two hundred and forty; round about this were grouped the rooms, upwards of seven hundred in number. One of these measured one hundred and fifty by thirty feet, long and narrow as the exigencies of Assyrian engineering compelled, but massively built with walls twenty-eight feet in thickness. But it never became even an equal of Nineveh.[2] It apparently did not long outlive its founder, but sank away into insignificance.

Far more important than this creation of the fancy of an Assyrian king was the city of Arbaïlu. How old this city was is not known. There is

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[1] M. Botta's letters on the discoveries at Nineveh, translated from the French by C. T[obin]. London, 1850, *passim*. Rassam, *op. cit.*, p. 295. Sachau, *op. cit.*, pp. 106, 121.

[2] The site was a very poor one, as has often been pointed out (see for example, Sachau, *l. c.*); for it was badly supplied with water, and lay apart from the great lines of communication.

not in all the inscriptions any evidence that the Assyrian kings paid any attention to it. It certainly received at their hands no great palaces and no temples. It had no political weight in the development of Assyrian power, though it must have had an Assyrian populace. It lived a quiet life apart from the great tides of war or commerce during the Assyrian period, and survived the ruin which overwhelmed the empire. It was still an important city in Persian days, and continued to exist when the city of Nineveh was unknown save as a name in the memory. A great mound marks its site, and its name is retained in the modern Erbil.[1] The mound has not yet been excavated, and may very probably contain important memorials of the city's long career.

Outside the strict limits of Assyria lay the city of Naçibina. It lay upon the Kharmis, a tributary of the Khabur, at the foot of the mountains. It was the center of an Assyrian province, and continued to live under the name of Nisibis after the empire had ended. Hadrian ceded it to the Parthians, but it returned to Roman rule and was flourishing at the time of Septimius Severus (Septimia Colonia Nisibis). Under the Seleucids it still continued prosperous and bore the name of Antiochia Mygdoniæ. Its modern representative, a miserable collection of huts, has returned to the ancient name and is called Nisibin.

[1] Sachau, *op. cit.*, pp. 111–113 (with picture of the mound).

Farther west, on the left bank of the Balikh, was Harran, or Road-Town, through which passed the great highways from south and east toward the west. Harran was the center for the worship of Sin, the moon god, in the north, as Ur was in the south, and perhaps no sacred city in the land ever held so tenaciously to its ancient belief. When Christianity overran Mesopotamia this city remained the last center of paganism, and under the Mohammedan sway the sect of Sabeans here continued the worship of the moon. The history of Harran runs so far back that its origin is lost in the mists that surround the very beginnings of civilization. During the continuance of Assyrian power it was a constant factor in the life of the empire, and when Nineveh had ceased to vex mankind it was still a powerful city. The Parthians made a stronghold of it, and there Crassus was defeated. It later formed part of the Christian kingdom of Abgar, and became a city of the Roman empire. The mounds[1] which mark its site must certainly contain memorials of its long history, but they have not been excavated. The classical name was Carrhæ (which evidently contains a reminiscence of the ancient name), and it has still some importance as a road town.

[1] Ainsworth, *Euphrates Expedition*, i, p. 203.

Northeast Gate and City Wall of Harran.

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CHAPTER XII

THE PEOPLES OF BABYLONIA AND ASSYRIA

THE civilization of Assyria and Babylonia and their great sweep of history were not made by one people. Men of several different stocks contributed to the result, and here, as often afterward in the world's history, the history bears the stamp, not of a unity, but of a diversity of races. Even in modern times, with all the resources at our command, it is often difficult to distinguish the different strains of races and to trace their influence in the movements of history. We need, therefore, feel no surprise that there should be great difficulty in tracing out the racial affinities of the peoples who made history in Assyria and Babylonia.

At the earliest period to which direct monumental records go back we find a people in possession of Babylonia who are called by us Babylonians. Their written records are found to be in part a Semitic language, a language closely related in forms and vocabulary to the northern branch of the Semitic family, of which Hebrew and Aramaic are well-known examples. But when these earliest records are all gathered together it appears that large numbers of them are

bilingual; that is to say, side by side with the Semitic Babylonian is found another language, quite different in form and construction. To this other and stranger speech we have given the name Sumerian because it is associated primarily with the land of Sumer, or southern Babylonia. In this Sumerian language was found the first proof of the existence of the Sumerian people. Their language[1] is agglutinative, and they have been connected on linguistic grounds both with Indo-Europeans and especially with Turanians. But the evidence is slight in itself and of doubtful weight even if it were more extensive, for language is, after all, proof, not of race, but of social contact,[2] though this sound fact seems frequently to be forgotten by some students of the Sumerian, who on slight philological resemblances deduce theories of racial affinity.[3]

The Sumerians appeared first in southern Babylonia before historic time, and what little

[1] See above, Chapter IX.

[2] The theory that the Sumerians were Mongols has been strongly supported by Hommel, Lenormant, and others, and as strongly denied by Halévy, Paul Haupt, and Donner. In recent times attempts have been made by Hermann (*Ueber die Sumerische Sprache*, Russian Archæological Congress, Riga, 1896), in a paper which I have not seen, to show that there is a connection between Sumerian and the Ugro-Finnish member of the Ural-Altaic family. (See A. H. Keane, *Man Past and Present*, Cambridge, 1899, pp. 273, ff.) The solution of the question is not yet found.

[3] On language as *not* a proof of race see the clear exposition in Sayce, *The Principles of Comparative Philology*. Fourth Edition (London, 1893), pp. 175, ff. See further, Tucker, *Introduction to the Natural History of Language* (London, 1908), p. 228.

we know of that earliest period rests chiefly upon faint inferences and even upon conjecture. It seems probable that they entered Babylonia from the east over the mountains and table lands of Elam, where marks of their civilization, and notably their script, are discernible in early times. But it does not yet appear whence they came into Elam, and there is no solid basis for speculation.[1]

As the excavation of Sumerian sites in the southern part of Babylonia progressed they yielded ever more evidence concerning this people. Their literature appeared written in their own language, their history began gradually to be recovered, and, most conclusive of all, their statuary revealed a racial type quite distinct from that of the well-known Semitic. We now saw the Sumerians as a people with skulls more round than the Semitic, rather approaching the brachycephalic than the dolichocephalic type, with faces shorter, the eyebrows markedly heavy, the nose, indeed, prominent and strong, but with much lower bridge than the Semitic and pointed at the end rather than full and fleshy, as among the Semites. The lips are fine and thin and the chin small and often retreating. The heads are usually shaven, and where any

[1] Hall (*The Ancient History of the Near East*, London, 1913, p. 173) tentatively suggests India as their original home and connects them with the Dravidian ethnic type of India. For the Sumerian in general see Eduard Meyer, *Sumerier und Semiten in Babylonien* (*Abhandlungen der kgl. Preuss. Akademie*, 1906).

hair is portrayed it bears the character of a wig, worn on important or ceremonial occasions.[1] The faces are also uniformly shaven, and are therefore instantly distinguishable from the bearded Semites. The earliest Sumerians are sculptured with breast and upper part of the body nude, and wearing a thick woollen petticoat, usually with a scolloped or fringed border. In later times the whole body is covered with a mantle hung over the left shoulder, and falling nearly to the feet, with the opening in front and usually decorated with a border.

But, though we are unable to say who these Sumerians were, we are in a position to aver some facts concerning their work in the world and their relations to the Semitic Babylonians. It was they who invented the cuneiform system of writing, a cumbrous and artificial system indeed, and yet a wonderful advance upon the still more cumbrous picture writing out of which it was developed. When the Semitic Babylonians conquered the Sumerians and possessed their lands they adopted at once this system of writing and took over with it the literature which it enshrined. This literature was especially devoted to the setting forth of forms of worship, of hymns of praise to gods, of prayers

[1] On the Stela of the Vultures, Eannatum and his soldiers are represented with heavy hair falling on their shoulders from beneath the helmets, but the dead on the field have shaven heads. The inference quite naturally is that the king's hair and that of his soldiers is only a ceremonial wig. See King, *Sumer and Akkad*, p. 43.

for forgiveness from sins, and of incantations for delivery from disease. It was natural that the Babylonians should desire to retain this religious material in its ancient tongue, as it was not to be expected that it would be so efficacious if translated into their own Semitic speech. There arose, therefore, a custom of providing these religious texts with interlinear translations into the Semitic speech. Sumerian had now come into the same position as did Latin in the religious life of the Middle Ages. It remained only that it should advance into a position similar to that held by Latin in general life in the same period. This also came about, for not only were religious texts so written, but also historical texts as well. Gradually this custom ceased and the Sumerian language was no longer mentioned or used; but the system of writing which the Sumerians had devised continued in full use to the fall of the Babylonian commonwealth, and even lived on in the hands of the Indo-Europeans who came after them.[1]

The Babylonians had indeed conquered the Sumerians, but in a higher sense they had been

[1] A great controversy has raged about the question of this Sumerian language. It has been asserted by some that the view taken here is wholly erroneous, and that we have in these bilingual texts not two languages, but simply two forms of writing. According to this view the so-called Sumerian language was simply a cabalistic method of sacred writing, invented for their own purposes by Semitic priests. This view, first proposed in this form by Halévy, in the beginning secured some converts, but has latterly lost ground. To the present writer the facts seem wholly opposed to it. See Chapter VII.

conquered by them, and their civilization in general and their religion in particular owed a deep debt to this strange, almost unknown people who stand on the very confines of human history.

At about the beginning of the fourth millennium before Christ the Sumerian people, who had already attained a high civilization, found their land invaded by a vast horde of barbarians, for so these must have appeared to them. These were Semites, closely related in blood to the Arabs who once overran Spain and the Hebrews who once came pouring across the Jordan into Canaan. Whence these invaders came is not certain. It has been thought by some that they came from the northeast through the passes of the Kurdistan mountains, and that Babylonia was the land in which they had their first national development and from which they spread over western Asia to make great careers as Arabians, Canaanites, and Aramæans.[1] This

[1] The northern origin of the Semites was adopted by Renan, *Histoire générale des languages sémitiques*, 2d edit., p. 29, but the strongest argument for it is presented by J. Guidi, *Della Sede primitiva dei Popolo Semitici*, in the *Memorie della R. Accademia dei Lincei*, 3d series, vol. iii. (Some additions are made to the evidences of Guidi by Jacob Krall, *Grundriss der altorientalischen Geschichte*, I Theil, Wien, 1899, p. 31). To this same view adheres Hommel, who has devoted much learning to its exposition and defense; for example, *La Patrie originaire des Sémites*, in the *Atti del IV Congresso Internationale degli Orientalisti*, vol. i, pp. 217–228, Firenze, 1880; *Die Namen der Säugethiere*, Leipzig, 1879, pp. 496, ff.; *Die Semitischen Völker und Sprachen*, pp. 7, 11, 12, 59–63, 95, ff.; *Die Sprachgeschichtliche Stellung des Babylonisch-assyrischen* (Etudes archéologiques linguistiques et historiques dédiées à C. Leemans, Leide, 1885, pp. 127–129) and *Geschichte Babyloniens und Assyriens*. Berlin, 1885, p. 267.

view, once stated and supported with surpassing learning, is now almost abandoned, and but few great names may be cited among its modern adherents. A second view finds the original home of the Semites in Africa, either in the northeastern[1] or northwestern part of the great continent.[2] It were idle to deny that strong linguistic support for this view may be found in the recognized affinity between the Semitic languages and Egyptian, Coptic, Berber, and the Kushite (Bisharee, Galla, Somali, etc.) languages. But when all has been said in favor of this view there still remain more potent considerations in favor of a third view, that the original home of the Semites was in Arabia,[3] out of which they came in successive waves of migration to find larger and more bountiful

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[1] Nöldeke, Theodor, *Die Semitischen Sprachen*, 2 te Auflage. Leipzig, 1899, p. 11. Nöldeke puts forward this view very tentatively and only as an hypothesis, and admits "dass die Herkunft aller Semiten aus Arabien sehr wohl denkbar wäre" (p. 13).

[2] Professor D. G. Brinton, of Philadelphia, has suggested northwestern Africa as the primitive seat of the Semites, and has supported it with many arguments, chiefly ethnological. His paper, read before the Philadelphia Oriental Club, has been printed together with a criticism by Professor Jastrow, who inclines to Nöldeke's view rather than to Brinton's. *The Cradle of the Semites*, by Daniel G. Brinton, M.D., and Morris Jastrow, Jr., Ph.D., Philadelphia, 1890.

[3] Sayce, *Assyrian Grammar for Comparative Purposes*, 1st ed., p. 13. E. Schrader, *Die Abstammung der Chaldaer und die Ursitze der Semiten*, in the *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, xxvii, pp. 397, ff. Tiele, *Babylonisch-Assyrische Geschichte*, pp. 106, 107. Ed. Meyer, *Geschichte des Altertums*, i, pp. 207, ff. Keane, *Man Past and Present*, pp. 490, 491. Winckler, *Die Völker Vorderasiens*. Leipzig, 1899, p. 10. Winckler states the general movements and the general relationships of the Semitic peoples very admirably in this brief tract.

lands in Babylonia, Mesopotamia, and even in the far western land of Canaan. This latter view seems ever to find fresh support in the newer facts, and to me is clearly the best solution of the problems. It should, however, be admitted that it does not find universal acceptance among scholars.[1]

The Semites first appear in Babylonian history in the north and move gradually southward into possession of the whole country. It seems therefore probable that, though their original home was in Arabia, they had passed into Babylonia from the northwest, having first traversed Canaan, or after a temporary residence there or in its neighborhood. The Babylonians conquered the Sumerians, drove some of them out, destroyed others, and assimilated the rest. During the long course of their history they remained as unchanged and unchangeable as the Egyptians. They were powerful in warfare at first, but gradually cast aside the warlike spirit and became so devoted to the arts of peace as to be unable to defend their country from invasion, which happened again and again during their long history. Yet so great was their vitality and so marked their racial individuality that they always triumphed in the end and absorbed their conquerors. Just as their type, the distinctive Semitic type, prevailed over the Sumerian, so also did it prevail over the Kassites, Elamites,

[1] See for example the remarks of Ungnad in his *Hebräische Grammatik*.

and that long line of lesser peoples who conquered them in part or settled among them peaceably. The Babylonians were devoted chiefly to religion and to literature, as their remains would seem to indicate. It was they who erected the largest temples that the world has ever seen, and as the materials used were perishable, ever reerected and restored them. It was they who provided these temples with books, liturgies, hymns, and prayers, and heaped up thousands of tablets recording all these building operations and giving glory and honor to the gods who had inspired the work.

Out of the Babylonian people sprang the Assyrians, for Assyria was colonized from Babylonia. Though of the same blood, the Assyrians gradually became a very different people. Less exposed to invasion during a large part of their history than the Babylonians, they remained of much purer Semitic blood. In religion, in language, and in literature they continued to the end ever dependent upon the southern people. Their climate belonged to the temperate rather than to the subtropical zone, and the inclemency of winters over at least part of their little kingdom served to toughen their fiber, while their early efforts at conquest gradually hardened them into the form which they bore during all their history. They became a military people on the one hand, and a commercial people on the other. Early accustomed to blood and

fire, they became totally unlike the peace-loving Babylonians, and their history is filled with deeds of almost unparalleled savagery. Wherever their armies marched women were ravished, men were mutilated or flayed alive, houses and cities and fields of grain were given to the torch, and desolation and ruin were left behind. Yet out of this conquest they achieved empire, and, sobered by its burdens, learned to govern as well as to destroy, and devised methods of subjection and of rule, which were afterward applied by a people who in certain respects much resembled them, the Romans. Along with this development in the arts of war and the practice of government there went a great growth in trade. The Assyrian traders invaded the whole East and took gain both from buying and from selling, from transport and from storage. They influenced the king to conquest in more than one instance that the field of their operations and the extent of their money getting might be increased. That they contributed to civilization by their barter and trade there is no doubt, and this result affords a bright contrast to the weary details of blood and fire which otherwise would fill the whole canvas. Yet, though thus given over in large measure to war and commerce, the Assyrians knew their lack and ever looked with envy to the superior civilization of Babylonia. Some of their kings imitated the Babylonians in the founding and storing of

libraries with books of religion and literature and not merely with boastful narratives of bloody conquest. Others bore witness to the attractiveness of the Babylonian culture by conquering parts of that country that they might worship at its ancient shrines and add to their names royal titles, bestowed by an hereditary priesthood, which had come down from an immemorial past. Thus were mixed up in the Assyrian nature elements both of barbarism and of civilization, and now one and now the other is manifested in the work which they did in the world. But when the whole history is surveyed, as in a panorama, the barbarism must be admitted to prevail over the civilization and the total impression to be less favorable than that which the Babylonians make upon us.

Long after the Babylonians and Assyrians had risen to power in the world the great valley came to know another people who called themselves Kaldu, and were known to the Hebrews as Kasdim, to the Greeks as Chaldaioi (*Χαλδαῖοι*), from whom we have called them Chaldeans. They were undoubtedly Semites,[1] for not only are their names purely Semitic, but their religion, manner of life, and adaptation to Semitic usages all bear the same stamp as those of the Semitic Babylonians. The origin of the Chaldeans is,

[1] Jensen has suggested that they were "Semitized Sumerians," and Lehmann appears to agree with him (Lehmann, *Shamashshumukin*, p. 173), but at best the opinion is merely a guess and has no direct support in the inscriptions.

like that of the Babylonians, lost in the past. They also probably came out of the heart of Arabia and settled first along the western shore of the Persian Gulf, pushing gradually northward until they held the country about the mouths of the Tigris and Euphrates. From that district they begin the long series of incursions which finally won for them the control of Babylonia, and made them the heirs of the Babylonian people in civilization and in empire. In the beginning they were nomads and tillers of the soil, but became men of the city and formed little city kingdoms similar to those which had existed in the early days of Babylonian civilization. The lines of their early development were, however, more similar to those of the Assyrians than to those of the Babylonians. They developed military prowess and founded a great empire by the sword. Its extension toward the west was marked by bloodshed and the destruction of ancient centers of civilization. But later the objects of civilization were furthered by them and their kings became patrons of learning. In this latter stage they are perhaps to be regarded as having lost their national life and character and as transformed by the Babylonian civilization which they had conquered.

The Sumerians, the Babylonians, the Assyrians, and the Chaldeans—these were the peoples who wrought out the history here to be narrated. Besides these there were many other

lesser peoples who contributed to the movements which are to be told, but their characterization may best be left to the time of their appearance in the narrative, as they were secondary rather than primary actors in the great drama.

CHAPTER XIII

THE CHRONOLOGY

THE end of the day and the coming of darkness meant much to man in early times, for something of dread, if not of tremulous fear, must have been associated with the night. The flight of time must first have been measured by the passing of days. With the Babylonians day began with the rising of the sun, so have the classical writers unanimously reported to us.[1] This may well have been the custom among the common folk, but there seems to be evidence enough to show that the Calendar as prepared by the astronomers for public use began the day with sunset. This must have gradually supplanted the older method and come finally into common use, influencing other Oriental peoples to the same practice.[2] For astronomical

[1] "Ipsum diem alii aliter observavere, Babylonii inter duos solis exortus." Pliny, *Nat. Hist.* ii, 77 (79), (Teubner ed., Mayhoff, i, p. 199 (1906).

"Babylonios porro aliter: a sole enim exorto ad exortum eiusdem incipientem id spatium unius diei nomine uocare." Macrobius, Saturn i, iii, 4. Teubner, ed., Eyssenhardt, p. 10 (1893), and in almost the same words also in Gellius, *Noct. Att.* iii, ii, 5. Teubner, ed. Hertz, i, p. 147 (1903).

[2] It is interesting to note that the early Hebrews would appear to have counted the day from sunrise to sunset, with the night as a sort of appendage to it. In post-exilic times, however, the day was reckoned as beginning at sunset. See Lev. xxiii, 32, and compare the enumeration of evening and morning in the priest code, Gen. i, 5, 8, 13.

purposes, as distinct from popular, the sunset was not a good time from which to reckon time in the study of the heavenly bodies. The astronomers, therefore, began their day with midnight,[1] and the space of time from midnight to midnight was divided, according to the sexagesimal system, into six portions. Each one of these portions was divided into sixty portions, and each of these latter was again subdivided into sixty portions.

This was the orderly astronomical method of time division as generally practised in Babylonia and Assyria from the sixth century B. C. and onwards.[2] Unfortunately, we do not know the names of these divisions of time as used by the Babylonian astronomers, but their import and bearing are clear enough. Each of these astronomical hours would correspond to four of our hours, and one sixtieth of one of these would correspond to four minutes in our reckoning.

This astronomical method seems not to have been in popular use, for the common everyday custom among the Babylonians divided the day into six *bîru*, each of which would correspond to

[1] Though modern astronomers, following the example of Ptolemy, reckon from midday.

[2] It is not here asserted that this method is not older. It may well be much older. It is only implied that we have abundant evidence of it at least that early. It seems to me, however, that the attempt to carry astronomical knowledge of a *scientific* character beyond the sixth century has failed. See, however, Jeremias, *Das Alter der babylonischen Astronomie* 2te Auf. 1909, but compare Kugler, *Auf den Trümmern des Panbabylonismus*, Anthropos, 1909, p. 477, ff., and see further Jeremias, *Handbuch der altorientalischen Geistes Kultur*, chapter V.

two of our hours, the night being also so divided into six *bîru*[1] or double hours.

The days were gathered into weeks of seven days, and into months of thirty days, and the twelve months into a Moon year of three hundred and sixty days. Very early must have been the efforts to relate this year to the Sun year, and that equation gave much trouble and concern during many centuries, and was now accomplished in one way and now in another. It was quite natural that in a hot country the moon should be held in great reverence and its phases carefully observed and studied. In the hot seasons much work could be more comfortably accomplished by moonlight than beneath the desolating rays of the sun. The appearance of the new moon after dark nights would be a welcome sight, with its promise of the glories of full moon later to follow. The Babylonians soon learned that the lunar month contains, not thirty days with undeviating regularity, but now twenty-nine and now thirty, and that the moon year contained three hundred and fifty-four or three hundred and fifty-five days. The moon year was early seen to be shorter than the sun year, and the attempt

[1] bîru is ideographically written KAS-PU which is to be read *biru*, as Landsberger has shown. (*Zeitschrift für Assyriologie* XXV, 385, 386.) As a measure of time it signifies two hours, as a measure of length it signifies the distance that may be covered in two hours' travel, about six or seven miles. For a curious use of it in this latter sense see the story of Ellil and the Labbu (Rogers, *Cuneiform Parallels*, p. 61, f.).

somehow to bring order out of this dissonance had already begun in Sumerian times. The attempts were failures quite as a matter of course, for even a gross and crude equalization would require hundreds of years of exact observation of the heavenly bodies. It is well to remind ourselves when we are willing either to exaggerate the knowledge of the ancients, as the manner of some is, or, on the other hand, to disparage their efforts, that this most desirable equalization is only most clumsily achieved even yet by the use of months having twenty-eight, twenty-nine, thirty, and even thirty-one days, and by the crude device of leap years. At present the mean synodical month, that is, the month from new moon to new moon, or from full moon to full moon, contains 29.53059 days, and the sun year has 365.24220 days. We need bring no railing accusation against Sumerians, Babylonians, or Assyrians that they did not solve the pretty problem which these interesting figures present.

In the earliest Sumerian period known to us, the Sargonic era, the months of the year were named and arranged according to the following scheme:

1. ITU EZEN GAN-MAŠ.
2. ITU EZEN ḪAR-RA-NE-SAR-SAR.
3. ITU EZEN (DINGIR) NE-SU.
4. ITU EZEN ŠU-KUL.
5. ITU EZEN DIM-KU.

6. ITU EZEN (DINGIR) DUMU-ZI.
7. ITU UR.
8. ITU EZEN (DINGIR) BAU.
9. ITU MU-ŠU-GAB.
10. ITU MES-EN-DU-ŠE-A-NA.
11. ITU EZEN AMAR-A(-A) SI.
12. ITU ŠE-ŠE-KIN-A.
13. ITU EZEN ŠE-IL-LA.[1]

Some of these names are still of very doubtful interpretation, but fortunately there is no need here to dispute about the meaning of obscure Sumerian words; it will be sufficient to indicate those that may be regarded as established and to show the general bearing of the list upon human civilization. The beginning of this year was set in the autumn, and corresponded to the period of the ripening of the ears, as was also the case in pre-exilic times among the Hebrews. This was the time when the harvests had been gathered in and the autumn rains were preparing the ground for a new plowing.[2] This was the natural beginning of the economic year. In this month of GAN-MAŠ occurred the Su-

[1] For the names and order of the months compare Thureau-Dangin, *Revue d'Assyr*, vol. iv, No. iii, p. 83, f.; Radau, *Early Babylonian History*, p. 287 and the review of the same by Thureau-Dangin, *Zeitschrift für Assyriologie*, xv, p. 409; H. de Genouillac, *Tablettes sumériennes archaïques*, p. xvii, f.; F. K. Kugler, *Zeitschrift für Assyriologie*, xxii, p. 68, f.; Stephen Langdon, *Tablets from the Archives of Drehem*, p. 6, f.

[2] For the pre-exilic order of the months of the year, compare the feast of the ingathering which took place at "the outgoing of the year," bĕsēth haššānāh (Ex. xxiii, 16), or at "the year's revolution" tĕkūphath haššanah (Ex. xxxiv, 22). Here was quite clearly a *new* year's beginning, if there was an "outgoing," that is, of the *old* year.

merian festival of ZAG-MU, the *head of the year*, a feast which goes back to the earliest times.[1] The month corresponded to August of our calendar and its name, GAN-MAŠ, probably relates to the practice of reckoning up of the produce of the fields, and the arranging of the plans for the next sowing.[2] The next month, Har-ra-ne-sar-sar, is "the month when the cattle labor."[3] that is, the month of plowing.

The sixth month, DUMU-ZI, is the month of the feast of Tammuz, called at Nippur the month of the mission of Innini or Ishtar, and both of these names are associated with the myth of Ishtar's descent to Hades, and the return of Tammuz from the lower world after her descent. This is the feast of the return of the sun after the darkness of winter, when the days begin to lengthen, and is, therefore, a spring festival. There were in early Sumerian times two New Year's festivals, the one of the economic year in the autumn, the other of the solar year in the spring. This month is in the Ur dynasty, called itu Akitu, the month of the feast of the New Year.

[1] See Genouillac, *Tablettes sumériennes archaïques*, p. xvii, who would, however, locate this festival in the spring. Langdon, *Tablets from the Archives of Drehem*, p. 7, has correctly made this an autumn month in period of the Ur dynasty.

[2] Radau's suggested meaning for GAN-MAŠ, "field in blossom," seems quite clearly wrong, and Langdon's meaning, "a kind of food apportioned out to attendants of the king, etc." improbable.

[3] So Genouillac, *op. cit.*, p. xix, and also Kugler and Langdon. See further Boissier, Le nom assyrien du soc de la charrue, *Orientalistische Litcratur Zeitung* (1908), col. 300, f.

The seventh month, called ITU UR in the Sargonic period, is named in the period of UR ITU EZEN DINGIR DUN-GI, that is, the month of the feast of the god Dungi, the month having its name changed after the deification of King Dungi.

The eighth month is the month of the feast of the goddess Bau in the Sargonic period, but by the time of Gudea this feast was regarded as the beginning of the New Year, and in the neo-Babylonian period was identified with the ZAG-MU or New Year's feast.

The ninth month was the month of the feast of Anu, and in the period of Sargon this was the intercalary month, used to bring the lunar year up again with the solar. This was determined by the barley harvest, which should properly fall in the month ŠE-ŠE-KIN-A. If it did not in any year, the intercalary month was introduced in the following year.[1]

As we come downward from the Sargonic period we find numerous evidences of the giving of other names to many of these months, as also of the gradual shifting of the seasons, and so of the introduction of more than one intercalary month when this became necessary to retrieve the annual loss of time made by the lunar year in comparison with the solar.

When the Semitic Babylonian tongue had supplanted Sumerian as the language of the people

[1] See Kugler, *Zeitschrift für Assyriologie*, xxii, pp. 69, 70.

in general the Sumerian names of the months were supplanted by Semitic and the year began with the vernal equinox, yet continued to bear, as we shall see, in the name of one of its months the evidence that it also had once had a beginning of a New Year at the time of the autumn ingathering. The Semitic names of the months, with the names also of the gods to whom they were dedicated, are these:

Nîsânu	of Anu and Ellil.
Âru	of Ea, lord of men.
Simânu	of Sin, first son of Ellil.
Du'ûzu	of the hero Ninib.
Âbu	of Ningishzida, lord of justice(?).
Ulûlu	of Ishtar, queen [of battle(?)].
Tashritu	of the hero Shamash.
Arakhsamnu	of the wise one of the gods, Marduk.
Kislimmu	of the great hero Nergal.
Tebêtu	of Papsukal, vizier of Anu and Ishtar.
Shabatu	of Adad, governor(?) of heaven and earth.
Addâru	of the seven gods, of the great gods.
Second Addâru	of Ashur, father of the gods.

As in the case of the Sumerian months, so also in this, are there uncertainties still in the explanation of the names of some of the months, but in this case we know even better than the other the significance and adjustment of the whole. Light is cast upon it by the use of it among the Jews. They had had a calendar with the New Year in the autumn, as we have already seen, with the months named according to ancient Canaanite models, Abib,[1] the month

[1] *Abib*, Exodus xiii, 4; *Ziv*, 1 Kings vi, 1; *Ethanim* viii, 2; *Bul*, 1 Kings vi, 38. The other early names have perished.

of ripening ears, which subsequently became the first month; Zib, the month of flowers, later the second month; Ethanim, the month of perennial streams, afterward the seventh month; and Bul, the month of rain. These were abandoned and the months were distinguished by numerals in the exilic period, and after that these Assyro-Babylonian names were adopted, and though only seven of them appear in the Old Testament, all are found in the Mishna.[1]

The name of the first month, Nisanu, is connected with the root meaning to move or start and corresponds to March–April, and is the opening month of the ecclesiastical year. Tashritu, which signifies "beginning, inauguration," was the first month of the civil year, as was Tishri among the Jews, both peoples having two New Year's celebrations in ancient times. In modern times the Jewish year has its beginning in Tishri, and the month of Nisan is given over to the great feast of the Passover. In the calendar of the Seleucidae Nisan was the month of the year's beginning, but in the Arsacidan calendar Tishri was the first month.[2] The differences are worth noting

[1] The seven which appear in the O. T. are *Nisan*, Neh. ii, i; Esther iii, 7; *Sivan*, Est. viii, 9; *Elul*, Neh. vi, 15; *Kislev*, Zech. vii, 1, Neh. i, 1; *Tebeth*, Est. ii, 16; *Shebat* i, 7; *Adar*, Est. passim, Ezr. vi, 15. All of them are found in Megillath Ta'anith, which was begun before the Christian era, though it has additions as late certainly as the second century A. D., as, for example, the mention of Hadrian's persecution.

[2] Epping, *Astronomisches aus Babylon*, p. 177. Compare F. K. Ginzel, *Handbuch der mathematischen und technischen Chronologie*, i, p. 136, f.

as an evidence of the curious changes to which the calendar has been subjected, from Sumerian to modern times.

As the centuries passed onward astronomical knowledge increased, and from the sixth to the third centuries the progress was increasingly rapid. To the people the year remained a lunar year, but to the astronomers the solar year had become the normal means of reckoning. In the third century they had arrived at a most close approximation of its true length,[1] and their other astronomical knowledge has attained the respectable dimensions of an embryo science.

The brief survey of the calendar will, however, have taught us how difficult were the problems of time relation which confronted these ancient peoples, and when we realize how fragmentary in many respects was their knowledge, we shall not approach with too high hopes the study of the materials which they have left. We shall not expect their chronological systems to be scientific in the modern sense.

Unlike the Egyptians, both the Assyrians and Babylonians, but especially the latter, gave much attention to chronology, seeking in a number of different ways to preserve the order of events and to construct a backbone for their historical recollections. The chronological material thus pro-

[1] They had made out the length of the sidereal solar year to be 365 days, 6 hours, 13 minutes, and 43 seconds, which differs only by 4 minutes and 30 seconds from that of modern astronomers.

duced must have been very extensive, for the portions which have come down to us are silent witnesses of the yet unrecovered or totally destroyed materials of which they were but fragments. Our chronology of the history of these people must be based primarily upon their own chronological materials, but from certain of the Greek writers useful material is secured. All this material may here be grouped in order, accompanied by notes upon its value and use, as sources for chronology.

A.—Babylonian and Assyrian Monuments

I. *Babylonian Chronological Materials.* The Babylonian priests, historiographers and chronographers have left us an enormous mass of chronological materials, all now in a fragmentary state, but showing clearly how much importance was attached by them to the arrangement of historical facts in due order of time. These original sources may thus be arranged:

1. *The Babylonian King List A.* A brief list of the names of the kings of several Babylonian dynasties, now badly broken, with many names missing. By the side of each king's name is given the number of years of his reign, and at the end of each dynasty also a summation of the years of reign of all the kings of that dynasty. It contains, as now preserved, portions of four columns, and begins with the summation of the number of kings of the first dynasty of Babylon.

The first name on the list is that of Iluma-ilu, the first king of the second dynasty of Babylon, whom we know to have been contemporaneous with Samsu-iluna and Abeshu, the seventh and eighth kings of the first dynasty. The last name is that of Kandalanu. The list was compiled and written out in the neo-Babylonian or Chaldean period.[1]

2. *The Babylonian King List B.* A list of Babylonian kings, containing the names and years of reign of the kings of the first and second dynasties, with the years of reign of each one, and also the summation as before.[2] This supplements King List A by supplying the names of the eleven kings of the first dynasty, repeating also the names of the kings of the second dynasty, but without the number of years of reign of each one.

These two King Lists formed the foundation of modern study of the chronology of early Babylonia. It has now become evident that they were modeled upon ancient Sumerian king lists, for since their discovery there have been

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[1], [2] These two King Lists have been repeatedly copied, collated, and verified. The chief literature upon them is as follows: (a) *Proceedings of the Society of Biblical Archæology*, 1884, pp. 193–204 (Pinches). (b) *Sitzungsberichte der Berl. Ak. der Wissenschaften*, 1887, pp. 579–607 (Schrader). (c) *Assyrische Gebete an den Sonnengott*, I u. II, Leipzig, 1894 (Knudtzon). (d) *Proceedings of the Society of Biblical Archæology*, 1888, pp. 22, ff. (Pinches). (e) *Keilinschriftliche Bibliothek*, Berlin, 1890, vol. ii, pp. 286, ff. (Schrader). (f) *Zwei Hauptprobleme der altorientalischen Chronologie und ihre Lösung*, Leipzig, 1898 (Lehmann). (g) They are now accessible in Rogers, *Cuneiform Parallels*, pp. 201, 202.

found Sumerian lists of precisely the same character and these may here be described.

3. *The Sumerian King List I.* A list of kings beginning with (a) Un-zi, the first king of the dynasty of Upi (Opis), and giving the names of the six kings of this dynasty; and continuing with (b) the eight kings of the dynasty of Kish from Azag-Bau to Nani-zah: the summation given at the end of (b) after the name of Nani-zah is 586 years for the eight kings, and the length of the reign of the first queen, Azag-Bau, is set down as 100 years. These two figures must surely be wrong. A reign of one hundred years is improbable, and even if this were true, the total number of years of the dynasty would amount to but 192 years, and the number 586 must surely be wrong. The errors are quite probably these. The numeral 100 in the Sumerian script very closely approaches in appearance the numeral 14. If this be the case the number of years to be assigned the dynasty would be 106 instead of 586.[1] Now it happens that the numerals 8 for the number of kings and 106 for the years of their reign, could very easily be confused into 586 in the Sumerian script. With these two emendations the list becomes quite usable for the chronological reconstruction of the early dynasties. (c) Lugal-zaggisi, king of Uruk; (d) the dynasty of Agade from Sharru-kin (Sargon I) to Shudurkib twelve

[1] So Arno Poebel, *Orientalistische Litteraturzeitung*, 1912, col. 289, f.

kings; (e) the dynasty of Uruk (Erech) from Ur-nigin to Ur-Shamash five kings. The tablet therefore contained the names of thirty-two kings, but four have been lost from the dynasty of Agade. At the end of each dynasty is given a summation of the number of kings in the dynasty, and the total of all the years of reign. After each dynasty is also given the name of the succeeding one, a point of great value. No statement is made as to whether there was any time between the close of one and the beginning of another dynasty, which in some cases, at least, is surely probable. It is therefore not possible to add all these dynasties together and so arrive at a sure date for the beginning by reckoning backward. There may have been no years between any two dynasties, and on the other hand there may have been dead years and the number of them be unknown to us.

This interesting and important tablet was probably composed at Kish (Oheimer) and in the period of Hammurapi.[1]

4. *The Sumerian King List II.* A list of kings beginning with Ur-Engur of the dynasty of Ur, and ending with Damik-ilishu of the

[1] First published by Scheil, *Les plus anciennes dynasties connues de Sumer-Accad, Académie des inscriptions et belles-lettres, Comptes Rendus*, 1911, p. 606, ff., with two plates. See also Scheil, *Naram Sin-Shargani-Sharri, Revue d'Assyriologie* ix, p. 69, with plate superior to the former one. Compare further, Arno Poebel, *Orientalistische Literaturzeitung*, 1912, col. 289, f.; Thureau-Dangin, *Rois de Kish et Rois d'Agadé, Revue d'Assyriologie*, ix (1912), p. 33, ff.; C. van Gelderen, *Zu der von Scheil veröffentlichen altbabylonischen Königsliste, Orientalistische Literaturzeitung*, 1913, col. 145, ff.

dynasty of Isin, with summations at the end of each dynasty. There are five kings of Ur who reigned one hundred and seventeen years, and sixteen kings of Isin, two of which have, however, been lost from the tablet, and three are only partly legible. One of those that are completely obliterated can elsewhere be recovered as Ura-imitti, and two of the partly illegible ones are also recovered. The summation at the end of this dynasty gives its total length as two hundred and twenty-five years, six months.[1]

5. *The Sumerian King List III.* A list of the rulers of Larsa, said to have been found at Senkereh (Larsa) and now deposited in the museum of Yale University, and first published by Professor A. T. Clay.[2] This list is of high importance. It begins with Naplanum and gives fourteen names with the years of reign of each one, these all belonging to the dynasty of Larsa and ending with the name Rim-Sin, after which at the end come the names of Hammurapi and Samsu-iluna. Before the discovery of this list Gungunum was supposed to be the first king of this dynasty, and the Synchronisms with

[1] The tablet, which is quite small and badly preserved, is now in the Museum of the University of Pennsylvania (No. 19797). It is published in phototype and also in autograph facsimile by Hilprecht, *Mathematical, Metrological, and Chronological Tablets, from the Temple Library of Nippur*, plate 47 and plate xv, with transliteration and translation, pp. 46, 47. He judges its age to be about 2000 B. C., that is to the Hammurapi period which must have been rich in such chronological computation and compilation. See also Hermann Ranke, *Zur Königsliste aus Nippur*, *Orientalistische Litteratur-Zeitung*, 1907, col. 109, ff.

[2] Yale Babylonian Texts, vol. i.

the first dynasty of Babylon were quite unknown.

6. *The Date Lists.* The usual method of dating business documents in Babylonia and Assyria is to locate them in the reign of the king. In later times it was customary to give the date as the fifth or tenth or any other day of such and such a month, in the fourth or any other year of the king's reign. In earlier times the process was simpler and less exact. It was then the custom, in many cases at least, to give nothing but the *year*, and the year was not *numbered* but *named.*

This naming of a year seems to have been the duty of some central authority, which yearly gave out to the different cities of the kingdom a name by which the year was to be known. It might be named: "the year in which the great temple of Nannar was built," or the year when some canal was built or in which a great flood occurred, or some battle was fought. We do not know at what season these lists normally appeared, nor just how the name was determined. If they were issued very soon after the new year it is quite impossible to have determined in advance what was the great event which should give its name to the year. It seems therefore probable that in some cases at least the name of the year was given out at the end of the last year, and that the new year was really named after the great event of the

year that was past.[1] In some cases, however, it would be possible to anticipate the coming of a great event, as, for example, the erection of a city wall, or the digging of a canal, and in such a case the year could be named after that which might be expected to be its great event. Should there occur, however, in the year some event deemed to be of greater consequence than that already selected for the naming of the year, it was quite possible to change the name, and this was actually done.[2] It may well be that the practice varied in different places and at different times.

When once the name had been given out all documents were dated by means of this name, or, as often happened, by some abridged form of it. Until it was given out the name of the former year was often used, the year being called simply "the year after" such and such events. These dated documents were preserved, and at later times were examined by the ancient chronologists or historiographers, and Date Lists compiled in which the year-names were arranged in regular order for each king's reign, and at the end of each reign these are summed up, and the number of years in the reign is given. It is quite probable that many

[1] This solution seems to have occurred simultaneously to several scholars, see, for example, Lindl, *Beiträge zur Assyriologie*, iv, p. 345, and Arno Poebel, *Zeitschrift für Assyriologie*, xx, p. 229, f.

[2] An interesting example of such a change is to be found in the reign of Sin-muballit. See Ranke, *Orientalistische Litteratur-Zeitung*, 1907, col. 231, f.

such lists were made. Of these a few have been found, and it may be hoped that yet others are to be recovered, while many must have perished.

(a) *Sumerian Date Lines, Pre-Sargonic Period.* The earliest known lists were found at Shuruppak, and seem to have been date lines based not on a king's reign, but rather on the period of government of some local mayor or magistrate. The form is of the simplest, such as:[1]

The magistracy of Ur-ninpa
The magistracy of Ka-ni-zi

After these come the date lines of Lagash such as:

Then was Entemena patesi of Lagash,
and Enlitarzi priest of Ningirsu.

(b) *Sumerian Date Lines, Early Dynasties.* With the kings of Accad begin the date lines with the names of the kings, with the years named after important events, such as:

Gudea, patesi. The year in which
the throne of Nina was made.[2]

[1] These dates come from business documents, and not from Date Lists in the technical sense, but they are examples of the forms then in use. The original Sumerian texts are published by Thureau-Dangin (*Recueil de Tablettes Chaldéennes*, Paris, 1903, Nos. 12 and 13), and translated also by him (*Die Sumerischen und Akkadischen Königsinschriften*, p. 224). The first Sumerian word is *bal* which he translates "Regierung," with the footnote alternative "Amt?"

[2] Thureau-Dangin, *Recueil de Tablettes chaldéennes*, No. 200, and *Die Sumerischen und Akkadischen Königsinschriften*, p. 227.

In the early period Semitic date lines of precisely the same model, such as:

In the year wherein Shargali-sharri
laid the foundations of the temple of Anunit
and of the people of Ea in Babylon and
wherein he took prisoner Sharlak, king
of Kutha.[1]

For these early dynasties about one hundred and thirty such date lines have been assembled already,[2] and thousands of them exist in tablets recovered already from the cities. These that have already been published belong to the dynasties of Ur, Larsa, and Uruk. These are all useful in enabling us to compile the number of years in a king's reign, or to check summations of the years of a reign, whenever these exist. From such lines upon documents of various kinds the savants of the period of the first dynasty of Babylon made up the official date lists which are next to be described.

(c) *Sumerian Date Lists.* The longest and most important of these is in the British Museum. It was recovered in the excavations by Dr. Budge in 1891.[3] The original of baked clay measures $5\frac{3}{8}$ inches by $8\frac{3}{4}$ inches, and was

[1] Thureau-Dangin, *op. cit.*, No. 118, and *Die Sumerischen und Akkadischen Königsinschriften*, p. 225. For similar dates see also Thureau-Dangin, *Les Tablettes de Sargon l'ancien et de Naram-Sin, Académie des Inscriptions et Belles-Lettres, Comptes Rendus*, 1896, p. 355, f.

[2] By Thureau-Dangin, *op. cit.*

[3] See above, pp. 335 ff. It bears the number Bu. 91-5-9, 284 in the Museum.

compiled in the reign of Ammizaduga, and gives the names of the years of reign of Sumu-abu, Sumula-ilu, Zabum, Apil-Sin, Sin-muballit, Hammurapi, and Samsu-iluna, with the summation of the number of years of each reign given at the end of each one. The tablet is unhappily damaged,[1] but is supplemented by another and smaller tablet, partially a duplicate, but continuing the list through the first ten years of the reign of Ammizaduga. The summations here given of the number of years in each reign do not perfectly agree with those in the King List. The following table gives the comparison:

Name	*King List*	*Date List*
Sumu-abu.....	15 years	14 years
Sumula-ilu.....	35 years	36 years
Zabum.....	14 years	14 years
Apil-Sin.....	18 years	18 years
Sin-muballit.....	30 years	20 years
Hammurapi.....	55 years	43 years
Samsu-iluna.....	35 years	38 years
Abeshu	25 years	[?] 8 years[2]

[1] It was first published by Pinches, *Cuneiform Texts from Babylonian Tablets*, vi, and is translated by Sayce, *Proceedings of the Society of Biblical Archæology*, xxi (1899), pp. 11, ff. The text is republished with transliteration and translation by King (*Letters and Inscriptions of Hammurabi*, vols. ii, No. 101, and iii), together with the text of Brit. Mus., No. 16, 924, numbered in his second volume 102. See further Ernest Lindl, *Die Datenliste der ersten Dynastie von Babylon*, *Beiträge zur Assyriologie*, iv, pp. 338–402, and Friedrich Delitzsch, *Randbemerkungen zu Lindl's Abhandlung*, ib, pp. 403–409.

[2] Of this number King (Hammurabi iii, p. lviii, note 3) says, "In the summary at the end of the tablet the number giving the years of Abeshu's reign is broken and reads [ ] viii; this should probably be restored as [xx] viii, but [xxx] viii, is possible." It may be noted that the King List gives the total of the years to the end of the reign of Ammiditana, when added up, as 252 years. If the years of the Date List are added without the years of Abeshu the total comes to 220

Ammiditana.....	25 years	37 years
Ammizaduga.....	21 years	10 [unfinished]
Samsuditana.....	31 years	

The disagreement of these two fundamentally important texts is somewhat disconcerting to the modern chronologist. A glance will show that in only two cases are the two in perfect agreement, while the disagreement in one instance (55 against 43) is very great. In every case we must follow the contemporaneous document rather than the King List compiled in the neo-Babylonian period. This instance proves quite clearly that there is no hope of constructing in our day a perfect system of chronology for this dynasty. The chronologists of the neo-Babylonian period were surely in possession of more materials than we, and what they could not accomplish, we shall not.

Similar date lists may once have existed in numbers, for other fragmentary specimens of them have been found in the Berlin Museum, which deserve here a passing mention. The first[1] contains only one date which corresponds to the twenty-ninth year of Ammiditana in the list published by King. This tablet is believed to have come from Sippar. A second tablet[2]

years. If to this be allotted 38 years the King List would then be 258 years, a very close approximation to the 252 years of the King List.

[1] Berlin Museum V. A. Th. 670 published by Peiser, *Zur altbabylonischen Datierungsweise*, *Orientalistische Litteratur-Zeitung*, 1905, col. 1, ff.

[2] Berlin Museum V. A. Th. 1200 published by Messerschmidt, *Zur altbabylonischen Chronologie*, *Orientalistische Litteratur-Zeitung*, 1905, col. 268, f.

in the same Museum contains one date line and this from the reign of Samsuditana, and the text is in Sumerian and also in Semitic Babylonian, called by the scribe Accadian. It names the year by the bringing to the temple of Ebarra, of costly votive objects of lapis lazuli, gold and silver. The temple here meant is doubtless that of Shamash in Sippar, though the temple in Larsa also bore this name. No year of this name is found in the other lists for this king.

Here then is evidence that years were not always named precisely the same in different parts of the kingdom. This is also made clear by a comparison of the Date Lists with the names actually used upon commercial tablets. These are often much abbreviated, sometimes expanded and not infrequently are quite different.[1] This diminishes the value of the lists for chronological computation, because we are often at a loss to determine precisely what year may be meant.

Since these were found the British Museum has supplied yet another duplicate of the date lists of the First Dynasty, which when complete, began with the reign of Hammurapi and extended to the seventeenth year of Ammizaduga, and was written in six columns. It is of importance not only because it supplements some of the broken parts of the former list, and gives alternative names for years in some cases, but

[1] See instances cited by King, *Hammurabi*, l. c. in the footnotes.

also because some of the names give valuable data concerning campaigns of the king.[1]

Yet another such date list was discovered by Scheil at Sippar, and is now in the Imperial Ottoman Museum at Constantinople, containing the names of the opening years of Hammurapi and of Samsuiluna. It was once larger and is believed to have once extended over the reign of Hammurapi, and eight years of Samsuiluna.[2]

After the period of the first dynasty, there comes a long period from which no distinctively chronological text has come down to us. They begin again to be numerous in the late Assyrian period, and again in the late neo-Babylonian and early Persian times. The former will call for notice later, to the latter we must now give attention.

By the time of the neo-Babylonian dynasties, the chronologists were able to advance beyond the assembling of date lines into what we have called Date Lists. They now compiled Chronicles in the proper sense of the word, in which they set down in orderly chronological fashion the names of the kings of earlier days, and against their names chronicled the chief events of each reign, giving much attention to campaigns and conquests. These are now, for us, prime histor-

[1] The new tablet is British Museum No. 80037 and is published for the first time in King, *Chronicles concerning early Babylonian Kings*, ii, p. 98, ff., compare also i, p. 157, ff.

[2] See Lindl, *Beiträge zur Assyriologie*, iv, p. 342; 343, Scheil, *Délégation en Perse, Mémoires*, ii, p. 83. It has been re-copied and republished by King, *Chronicles concerning Early Babylonian Kings*, ii, p. 97.

ical as well as chronological sources, for much of the original material on which they were based has perished. These Chronicles may here best be described in the order of the chronological material furnished by them rather than in the order of their composition.

7. *Babylonian Chronicles.*

(a) *Chronicle of Sargon and Naram Sin.* This Chronicle[1] begins with Sargon whose campaigns against "the land of the setting sun" and against Kasalla are recounted, and the victories of his later years against Subartu. Then follows the record of Naram-Sin his son, both these being of the dynasty of Accad. There follow then the exploits of Dungi, son of Ur-Engur, of the dynasty of Ur, and after him Ura-imitti of the dynasty of Isin. It concludes with a catch line in which Ilu-shuma, king of Assyria, is mentioned as an adversary of Su-abu. The latter is Sumu-Abu, the first king of the first dynasty, and this line therefore supplies a most valuable synchronism between the kings of Assyria and of Babylonia. Upon some such chronicle as this was founded the poetic and legendary story of Sargon which came to our hands out of the library of Ashurbanipal, which acquires new interest from the discovery of this chronicle.[2]

[1] British Museum No. 26472, first published by King, *Chronicles concerning Early Babylonian Kings.* Cuneiform text, vol. ii, p. 113, ff., transliteration and translation, p. 3, f.

[2] The Legend of Sargon is published in full in the cuneiform text by King, *Cuneiform Texts*, xiii, pp. 42, ff., and by him again in *Chronicles*

(b) *Chronicle concerning Early Babylonian Rulers.* This chronicle begins with Ura-imitti and the first seven lines duplicate the later lines of the former. The chronicle then passes to Hammurapi, the sixth king of the first dynasty of Babylon, and proceeds through the reigns of Samsu-iluna and Abishi (Abeshu), the seventh and eighth kings. These two are mentioned as making war on Iluma-ilu, the first king of the second dynasty of Babylon, thus providing another valuable synchronism. Then comes Shamash-ditana (Samsu-ditana, of the King List) the last king of the first dynasty, and following him Ea-gamil the last king of the second dynasty, who is synchronized with Kash-tiliash, the third king of the third, or Kassite dynasty, of Babylon.[1]

Upon some earlier copy of a chronicle such as these, or perhaps upon the very exemplar from which these came, there was based the historical portion of a most interesting omen tablet, relating to Sargon and Naram Sin, which belonged to the library of Ashurbanipal, recovered from the mound of Kuyunjik. The historical portions of this are confirmed and supplemented or corrected by these two chronicles, and confidence

concerning Early Babylonian Kings, ii, pp. 87, ff., with transliteration and translation. It is also transliterated and translated by Rogers, *Cuneiform Parallels*, pp. 135–137.

[1] British Museum No. 96152, first published by King, *Chronicles concerning Early Babylonian Kings*, the cuneiform text, ii, pp. 121, ff., the transliteration and translation, pp. 15, ff.

in the other historical portions of the omen tablet is increased.[1]

(c) *Chronicle of the Babylonian Dynasties* (cited sometimes as A and by others as S). This chronicle, once evidently of considerable size, but now fragmentary, begins with names only of the kings Ilu-illati and Enmennunna, then names the kings of the first dynasty of Babylon, but contributes little because of its broken condition, until the chronicle proper begins with name of Simbar-Shipak (formerly read Simmash-shikhu), the first king of the fifth dynasty of Babylon, who is said to have reigned seventeen years, though the King List assigns him eighteen. He is followed by Ea-mukin-zer, called in the chronicle a usurper who reigned but three months, though given five by the King List. The next king, Kasshu-nadin-akhi, reigned three years, with which the King List agrees. The summation given at the end of this dynasty of the country of the Sea is given as twenty-three years, though the number of years, if added, comes only to twenty years and three months. The scribe has probably

[1] The Omen tablet is British Museum K. 2130 and measures 3⅞ inches in breadth by 6¾ inches in length. The text was first published in IV, pl. 34, No. 1, and is now available in improved form, in its historical portions, in King, *Chronicles of Early Babylonian Kings*, ii, p. 25, f. The tablet has been often translated (see the references in King *op. cit.*) most recently with exhaustive discussion of the omen portions by Jastrow, *Die Religion Babyloniens und Assyriens*, ii, p. 227, ff. A neo-Babylonian Version of the Omens of Sargon and Naram-Sin (British Museum No. 67404) has also been published by King *op. cit*, pp. 40–45 and 139–141.

blundered, mistaking the three months for three years.

The chronicle continues with the sixth or Bazi dynasty, which had three kings to which the chronicle assigns a total, when individual reigns are added, of seventeen years and three months, though the summation gives the total as twenty years and three months.

The seventh dynasty follows with one king only who reigned six years, and with him this chronicle ends in its present condition. It is well to note how frequent are the differences with the King List, and again to remind ourselves of the blunders of the scribe in his reckoning up of the summations. It may well give us pause in ascribing too much accuracy to other computations of the chronologists of Babylonia. The art of chronology seems to have had pitfalls in ancient as in modern times.[1]

(d) *Chronicle from the Eleventh to the Seventh Century.* This chronicle now consisting of forty lines, divided into twenty-two sections, some of which give extended information quite after the fashion of other chronicles, while other sections

[1] This chronicle is composed of three fragments preserved in the British Museum and numbered K. 8532, K. 8533 and K. 8534, and then joined together. Two of them were first published by George Smith (*Transactions of the Society of Biblical Archaeology*, iii (1874), pp. 371, ff.). They were afterward published in incorrect order by Winckler, *Untersuchungen zur altorientalischen Geschichte* (1889), p. 153, autographed by Ludwig Abel. They were restored and joined by King in 1895. (See his note *Zeitschrift für Assyriologie*, x, p. 395, f., wrong reference in his *Chronicles* to this paper.) See also Bezold, *Catalogue*, p. 936. It is republished by King *op. cit.*, ii, pp. 143, 145, and also pp. 45–56.

afford only brief summaries. It seems quite probable that the copyist had before him two documents, which he was studying and excerpting. When the two originals agreed, he merely jotted down a summary or even only one line. Wherein they differed he copied out in full one of them.[1] The chronicle as now preserved begins with Marduk-shapik-zer-mati, who was probably the seventh king of the fourth dynasty of Babylon (about 1100 B. C.), and extends now to Erba-Marduk, who was probably acknowledged by the priests as a legitimate king of Babylon during the time when Sennacherib, king of Assyria (705–681 B. C.), was claiming the throne of Babylon, but not officially acknowledged there as legitimate. In its original form this chronicle may have extended into the Persian period.[2] The main body of the chronicle, between Marduk-shapik-zer-mati and Erba-Marduk, contains important chronological and historical information. It records, for example, the friendly relations established between Marduk-shapik-zer-mati, king of Babylon, and Ashur-bel-kala, king of Assyria, which confirms the statement of the Assyrian Synchronistic History. On the other hand the third section, in giving the name of the father of Adad-aplu-iddina as Itti-Marduk-balatu, an Aramaean usurper, comes into disagreement with the Synchronistic His-

[1] The suggested explanation, which seems to me probable, is King's, *op. cit.*, i, pp. 188, 189.

[2] So King suggests, and with good grounds.

tory which names the father, Esagil-shadûni, "the son of a nobody." The chronicle also supplies a new king named Ae-aplu-usur, previously unknown, who is probably the Elamite king who formed the seventh dynasty of Babylon.[1]

(e) *Babylonian Religious Chronicle.* This most curious and interesting chronicle begins with some badly broken lines, which yield little but a mention of Babylon and of some of its gates, and some allusion to the river Tigris. In column I, line 16, are the remains of the name of a king, MU-*libur*, which has since been identified[2] as the name of Nabu-shum-libur, the last king of the fourth dynasty of Babylon. In column II, line 14, there is an evident allusion to a solar eclipse which may, perhaps, have been the eclipse of July 31st, 1063, which astronomers reckon to have been total at Babylon, or that of June 20, 1070, which corresponds better to the month, but was not apparently total at Babylon.[3] Neither date is, however, of much use to us, for the tablet is so broken that it is quite impossible to determine in whose reign the eclipse took place. In this instance, therefore, as so

[1] This chronicle is British Museum No. 27859 and is first published by King, *Chronicles of Early Babylonian Kings*, ii, pp. 57–69 and 147–157, with an admirable and suggestive discussion of its merits and peculiarities, i, pp. 186–211.

[2] King, *Nabu-shum-libur, Proceedings of the Society of Biblical Archæology*, June, 1907, p. 221.

[3] See the computations of Mr. P. H. Cowell of the Royal Observatory at Greenwich as recorded by King (*Chronicles*, i, pp. 237, ff.).

often in others, astronomy fails to give us a fixed and exact date, much as we might covet it.[1]

(f) *The Babylonian Chronicle (B).*[2] A large tablet containing one hundred and seventy-six lines of writing, dated in the twenty-second year of Darius I, and containing brief chronicles of the chief events in the reigns of Babylonian kings from Nabonassar to Saosduchinos, and of Assyrian kings from Tiglathpileser IV to Ashurbanipal.

(g) *Fragments of a Babylonian Chronicle of*

[1] This Religious Chronicle is British Museum No. 35968 and is published for the first time in King, *Chronicles concerning Early Babylonian Kings*, ii, pp. 70–86 and 157–179. Compare also the discussion in i, pp. 212–240.

[2] This most important document, British Museum 84, 2–II, 356, is of unbaked clay and measures 6⅛ inches by 7¾ inches. It was first published by Winckler, *Zeitschrift für Assyriologie*, ii, pp. 163–168, cuneiform text with transliteration and translation, pp. 150–162 (1887). The cuneiform text was autographed by Strassmaier. Two fragmentary duplicates found by Bezold (83, I–18, 1338 and 1339) were published by him, *Proceedings of the Society of Biblical Archæology*, xi, pp. 131–138 (1889). Already in 1884 Pinches had directed attention to the tablet in the *Proceedings of the Society of Biblical Archæology*, vi, p. 198, ff. (1884), and had given an excerpt from it. It was published in type by Pinches, *Journal of the Royal Asiatic Society*, xix, pp. 655, ff. (1887), also with transliteration and translation. It is published again by Winckler, *Keilschrifttexte zum Gebrauch bei Vorlesungen*, p. 47, f. (1890), autographed by Abel, but unfortunately with several errors. The tablet, with the use of the duplicates mentioned above, was published by Strassmaier, *Inschriften von Darius* III, No. 559, pp. 398–405 (1897). It was transliterated and translated by Winckler in Schrader's *Keilinschriftliche Bibliothek*, ii, pp. 274–285 (1890). The cuneiform text appears again, after a renewed collation of the originals, in Delitzsch, *Assyrische Lesestücke*, 4te Auf. (1900), pp. 137–142, and is transliterated and translated by the same in *Abhandlungen der philolog. histor. Klasse der königl. Sächsischen Gesellschaft der Wissenschaften*, xxv, No. 1 (1906). See also transliteration and translation by Winckler, *Keilinschriftliches Textbuch zum Alten Testament*, 3te Auflage, pp. 58, ff., and Rogers, *Cuneiform Parallels*, pp. 208–219.

Nabonidus (*Nab. Chron.*).[1] A small broken tablet containing a chronicle of events of the last years of the reign of Nabonidus and the taking of Babylon by Cyrus.

(h) *Fragments of a Babylonian Chronicle* (*cited as P*).[2] An unbaked tablet, originally about eight inches square, containing accounts of expeditions made by some of the early Babylonian kings against external enemies. Less than one third of the tablet is preserved. That which remains begins in the reign of Kadashman-Kharbe, a son of Karaindash. The style of this chronicle is so similar to that of one of the Assyrian lists that it is probable the latter was copied from this.

Besides these direct statements made in inscriptions for purely chronological purposes the Babylonian texts of other kinds, both historical and contract, contain numerous allusions to dates, synchronisms, and the like. The more important of these may here be grouped together with the necessary comments upon their meaning or bearing.

7. *A Boundary Stone Dated in the Fourth Year of Ellil-nadin-apli.*[3] In this text it is stated that

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[1] (a) On a Cuneiform Inscription relating to the capture of Babylon by Cyrus, and the events which preceded and led to it. *Transactions of the Society of Biblical Archæology*, 1881, vii, 139, ff. (Pinches). (b) *Untersuchungen zur altoriental. Geschichte*, pp. 154, 155 (Winckler).

[2] (a) *Journal of the Royal Asiatic Society*, October, 1894, pp. 807, ff. (Pinches). (b) *Records of the Past*, new series, vol. v, pp. 106, ff. (Pinches). (c) *Altorientalische Untersuchungen*, Leipzig, 1893–97, pp. 115, 116, 122, 124, and 297, ff. (Winckler).

[3] Museum of the University of Pennsylvania, first published by Hilprecht, *Old Babylonian Inscriptions*, i, part i, plates 30, 31, text No. 83.

from Gulkishar, king of the Sea Lands to Nebuchadrezzar I there were six hundred and ninety-six years. At first blush this does not seem to have been a round number, yet it is possible that it may be the result of a calculation which existed originally only as the round number 700, from which four years were subtracted, as this document is the fourth year of Ellil-nadin-apli.[1] If, however, the supposed original round number was 700 years from Gulkishar to Ellil-nadin-apli, the four years would be added rather than subtracted, and the resulting number would be 704, rather than 696. It is perhaps well not to be over critical in dealing with the computations of these early Babylonian chronologists, though proper caution is always necessary. We should here probably do well to utilize this chronological note, as it is not in conflict with any other documents. The use of it is quite simple. Sennacherib, in his Bavian inscription,[2] has left the quite definite statement that Marduk-nadin-akhe, in the time of Tiglathpileser, had taken away to Babylon certain gods, which "after a lapse of four hundred and eighteen years" Sennacherib had restored to their original abiding place. He is reckoning from the destruction of Babylon, by himself, in the year 689 B. C. This gives us then the date 1107 as falling in the reign of

[1] This suggestion is King's, *Chronicles concerning Early Babylonian Kings*, i, pp. 89, 90.

[2] See below, p. 498.

Tiglathpileser I. Now Nebuchadrezzar I, father of Ellil-nadin-pali, was contemporary with Ashur-resh-ishi I, father of Tiglath-pileser I, who probably reigned about 1125–1100 B. C., the year 1107 falling in his reign. Ashur-resh-ishi, his father, reigned therefore about 1140 B. C., which was then the date of Nebuchadrezzar I. Adding to this 696 years we find the date of Gulkishar to be about 1846 B. C.[1]

8. *The date of Hammurapi, according to Nabonidus.* In an inscription of Nabonidus, concerning the rebuilding of the temple of E-barra at Larsa, occurs this interesting and important chronological note: "The name of Hammurapi, one of the old kings, who had built E-barra and the zikurat [step pyramid] on the old foundations for Shamash, seven hunderd years before Burnaburiash, I found and paid it reverence."[2] The king Burnaburiash, who is here meant, is the king who exchanged letters with Amenophis IV, king of Egypt, and was the contemporary of

[1] This chronological note has been much discussed. The chief references are Hilprecht, *Assyriaca* (Boston, 1894), pp. 20, ff. Hommel in Hastings's Bible Dictionary, i, pp. 223, 224. Winckler, *Altorientalische Forschungen*, i, p. 130, footnote 3, and also p. 267. Rost, Untersuchungen zur Altorientalischen Geschichte, in *Mitteilungen der Vorderasiatischen Gesellschaft*, 1897, p. 16. Lehmann, *Zwei Hauptprobleme*, pp. 17, 18. King, *Chronicles concerning Early Babylonian Kings*, i, pp. 88–90.

[2] The reference is in British Museum 85–4–30, 2, a cylinder with three columns, containing 169 lines. It is in col. II, 20–26. The cylinder was first published by Bezold, *Proceedings Soc. Bibl. Arch.*, 1889, plates III–V. It is partly (I, 31–III, 33) published by Peiser in Schrader's *Keilinschriftliche Bibliothek*, iii, 2, pp. 88–92, and completely transliterated and translated by Langdon, *Neubabylonische Königsinschriften*, pp. 235–243.

his father, Amenophis III, coming to the throne just before the end of his reign. As the chronology of Egypt at this period is quite well known, we have a most valuable synchronism. Amenophis III most probably ruled 1413–1377 B. C., and Amenophis IV 1377–1360 B. C.[1] The error is not likely to be above ten years either way. If now to 1375 we add this number 700 we arrive at 2075 as the date of Hammurapi. This is most useful, and may well be carefully considered in making up a chronological scheme,[2] even though it be impossible to reconcile it with other data.

9. *The date of Shagarakti-shuriash, according to Nabonidus.* In another text of Nabonidus there occurs again a chronological hint:

"E-ul-mash, her temple in Sippar-Anunit, which no king had built for eight hundred years, since the time of Shagrakti-shuriash, king of Babylon, son of Kudur-Enlil, his foundation stone I sunk a shaft for, I found it and looked at it."[3] Nabonidus reigned 555–539 B. C. If we count backward eight hundred years, we reach

[1] Eduard Meyer (*Aegyptische Chronologie, Abhandlungen der Königl. Preuss. Akademie der Wissenschaften*, Philos. histor. Classe, 1904, No. 1), would assign 1380 as the earliest date for the beginning of the reign of Amenophis IV. Compare Breasted, *History of Egypt.*

[2] There has been much discussion of this date, but most of it is now obsolete. For a recent judgment concerning it see King, *Chronicles*, etc., i, p. 18, f.

[3] The passage occurs col. III, lines 27–30, in the Cylinder of Nabonidus, British Museum, 82, 7–14, 1025, published in V. R. 64. Compare Peiser, Schrader's *Keilinschriftliche Bibliothek*, iii, 2, 96–107. Langdon, *Neubabylonische Königsinschriften*, pp. 218, ff. This passage is found on pp. 228, 229.

for Shagarakti-Shuriash the period about 1350. The figure 800 is quite obviously a round number, and is probably too high. We shall have to accept it, and use it as an approximation only and not be too much disturbed by it.

10. *The date of Naram-Sin according to Nabonidus.* In the same inscription of Nabonidus there is given still further a chronological note which carries us far back into the past: " . . . the foundation stone of Naram-Sin, which no king before me had seen for 3,200 years—[this] Shamash, the great Lord of Ebarra . . . showed to me."[1]

If we accept this, we are carried back to 3750 B. C. for the date of Naram-Sin, and therefore to about 3800 B. C. for his father, Sargon I. Over this date there rages a ceaseless controversy. It was at first generally accepted, for example, by Oppert,[2] Tiele,[3] Hommel,[4] and Delitzsch.[5] Of these Hommel afterward became persuaded that the date was too high and proposed to reduce it to 3400 B. C.[6] Lehmann has argued learnedly for a reduction of Naram-Sin to 2750 B. C.,[7] and Winckler[8] has expressed doubt about the matter. King has discussed the

[1] The passage occurs in col. II, lines 57–60, of the Cylinder of Nabonidus, British Museum, 82, 7–14, 1025, published in V. R. 64. For further references see last footnote. In Langdon's edition this passage is on pp. 226, 227.

[2] *Journal Asiatique* (1883), i, p. 89.

[3] *Geschichte*, p. 114.

[4] *Ibid.*, pp. 166, 167.

[5] Delitzsch-Mürdter, *Geschichte Babyloniens und Assyriens*, 2d ed., pp. 72, f.

[6] Hastings, *Bib. Dict.*, i, p. 224.

[7] Lehmann, *Zwei Hauptprob.*, pp. 172, ff.

[8] *Untersuchungen*, p. 44, f.

matter at length and argues that the early date is quite impossible, and instead of 3800 B. C., would set Sargon about 2650 B. C.[1] His arguments may briefly be summarized thus (a) The statement of Nabonidus is "an entirely isolated statement unsupported by any other reference in early or late texts; and the scribes who were responsible for it were clearly not anxious to diminish the antiquity of the foundation record, which had been found at such a depth below the later temple's foundations, and after so prolonged a search" (*Sumer and Akkad*, p. 61). (b) In the chronicle of Sargon and Naram-Sin, discussed above under 7, a, p. 483, "the section concerning Dungi immediately follows that concerning Naram-Sin. . . . Had so long an interval as fourteen hundred, or fifteen hundred, years separated the period of Sargon from that of Dungi and his father Ur-Engur, the chronicler might well have included in his text sections recording the deeds of the most famous kings who ruled in this long interval. That such sections were not included in the original text of the composition may be inferred from the fact that No. 26472 is labelled as the second tablet of its series, and was not merely inscribed with a selection of extracts, as was possibly the case with No. 96152." (Chronicles I, p. 16.) (c) "The final disproof of the figure is furnished

[1] See King, *Chronicles*, etc., i, pp. 15–17. *History of Sumer and Akkad*, pp. 60–62.

by evidence of an archæological and epigraphic character. No such long interval as twelve or thirteen hundred years can have separated the art of Gudea's period from that of Naram-Sin; and the clay tablets of the two epochs differ so little in shape, and in the forms of the characters with which they are inscribed, that we must regard the two ages as immediately following one another without any considerable break." (*Sumer and Akkad*, pp. 61, 62.) The first (a) of these arguments has little weight. Others of our chronological data rest on isolated passages and have little or none other support. The second (b) is also rather weak. It is the *argumentum e silentio* which is always precarious. King's point is that no other kings, in the chronicle in question, are mentioned between Sargon and Dungi. This is quite true. Yet we certainly know that there were kings between these two, and King dates Sargon at 2650 B. C., and Dungi about 2400 B. C. Here then is a period of two hundred and fifty years passed over by this chronicler without a name. If so much is passed over, it is surely possible that a longer period may have elapsed than King here assigns. The third (c) argument has most weight, but is not quite conclusive. Archæological and palæographical evidence is proverbially subject to the personal equation in individual judgment. It is indeed freely to be admitted that King's own personal judgment of the

relative age of Babylonian documents is based on a wider induction than that of any living man, but it may still be cautiously questioned as to whether, in such a case as this it is to be accepted as conclusive.

What then shall we say of this figure 3,200, which gives so much concern to modern chronologists? The arguments against it seem hardly sufficient to cause us to reject it altogether. It is indeed hardly probable that the historiographers of Nabonidus had before them lists which carried the dates backward to the exact number 3,200. It looks like a round number and was probably intended to be so taken. It looks suspiciously like a number based on generations of forty years each, as were apparently some of the chronological computations of the Hebrews, for example, in the Old Testament book of Judges. It was doubtless the result of computation and may quite well, as King says, result from the taking of some early dynasties as consecutive which were really in whole or part contemporaneous. When all is said, however, we shall probably do well to allow some weight to it and set Naram-Sin much earlier than has lately been the wont of modern students. It is not well also to discount the possibility that other dyansties may yet be recovered between Sargon's period and that of the dynasty of Ur. This is indeed an *argumentum e silentio*, and deserves therefore only slight weight.

12. Ashurbanipal in his narratives of victorious campaigns in Elam has also provided us with a chronological note. He brought back to its place of origin a statue of a goddess carried away to Elam by Kudur-nankhundi 1,635 years before—[1] that is, about 2285 B. C. This appears to be a valuable indication of time, for the numeral does not look like a round number, and there is no reason to doubt its substantial accuracy. Neither is there any special difficulty in attaching it to the other historical and chronological facts. There is, however, great difficulty in securing an application of it to Babylonian chronology. The most promising yet offered is the suggestion of King,[2] that it may apply to Ibi-Sin, the third king of the dynasty of Ur, who was carried off to Elam as a captive. But the objection to this seems to me to be that it reduces too much the date of Ibi-Sin.

13. Sennacherib also has left a very definite date in one of his inscriptions. He says:

"Adad and Shala, the gods of Ekallate, whom Marduk-nadin-akhe, king of Accad, in the time of Tiglathpileser, king of Asshur, had taken away and brought to Babylon, after a lapse of four hundred and eighteen years, I have taken out of Babylon and restored to Ekallate their place."[3]

[1] III. R. 38, 1 a. 12–18. Compare George Smith, *Asshurbanipal*, pp. 250, ff., and *Keilinschriftliche Bibliothek*, ii, p. 209, foot of the page.

[2] See the reference in H. R. Hall, *The Ancient History of the Near East*, p. 190, footnote 4, and compare the passage there cited in King's *History of Sumer and Akkad*, pp. 304, 305.

[3] III R., 14, 48–50. Compare *Keil. Bibl.*, ii, p. 119.

This, also, like the preceding, appears to be not a round number, but the result of some careful calculation or to rest directly upon early documents. It has, nevertheless, been much doubted in quite recent times. Rost[1] proposes to read 478 in order to bring it better into relation with what seems to him to be the order of events demanded by other chronological facts. On the other hand, Lehmann[2] proposes to read 318 instead of 418, because that figure appears better to fit the situation as demanded by the other facts. Neither of these attempts seems to be well founded. It is better to accept a number like this as final, even though it appears to be in conflict with the other facts in our very limited knowledge of ancient Babylonia. It appears on the face of the matter to be more worthy of credence than such round numbers as 600, 700, 800, and 3,200. If we accept it tentatively, it brings out our reckoning in this way: Sennacherib has dated the four hundred and eighteen years from the destruction of Babylon by himself. This took place in 689, and we should therefore be carried back to 1107 as a date during the reign of Marduk-nadin-akhe. To this date may be added another fact of importance for this reign. On a boundary stone of Marduk-nadin-akhe[3] there is mention of a victory over Assyria in the tenth year of his reign. It is

[1] *Untersuchungen*, p. 16. [2] *Zwei Hauptprobl.*, p. 98, ff.
[3] III. R. 43, col. i, 5, 27, 28. King, *Babylonian Boundary Stones and Memorial Tablets*, p. 43.

most natural to connect this victory with the removal of the statues to which Sennacherib refers. This would make 1107 the tenth year of the reign, and therefore 1117 or 1116 the first year of his reign.[1] This is a date that ought not lightly to be set aside, and the arguments brought against it by Rost and Lehmann do not seem to be decisive.

14. Tukulti-Ninib I notes that Ilushuma had restored the temple of Ishtar in Asshur seven hundred and twenty years before his time. The note bears the marks of having been based upon some accurate list, but it fits ill into the synchronism of Ilushuma with Sumu-abu of Babylonia.[2]

These are all the notices in Babylonian historical inscriptions which may be made directly applicable to the question of chronology. It has appeared in each case that they are not always to be reconciled with each other without some sort of forcing. Every chronological scheme that has been proposed has in some way made accommodations, either by altering the figures or by rejecting some of them altogether.

In addition to these King Lists, chronicles, and references in historical inscriptions the chronologist secures some aid from genealogical details. Thus a king often gives his father's name, and upon his father's inscription is found the name

[1] So Hilprecht, *Old Babylonian Inscriptions*, i, part i, p. 43, and Hommel in Hastings, *Bible Dictionary*, i, p. 224.

[2] *Mitteilungen der Deutschen Orient Gesellschaft*, No. 54, p. 26.

of the grandfather. By such simple means a whole dynasty may be arranged in correct order.

Even more important than this are external indications of age, and these may be divided into two parts: (1) The approximate date of an inscription, and hence of a king in whose reign it was written, may sometimes be obtained from palæographical indications. A study of the forms of characters and the manner of their writing gives at times an indication of the period. Likewise, also (2), the position in which an inscription is found within a mound is at times an approximate indication of age. Sometimes the finding of a text beneath the pavement of known age may be conclusive, but in gemeral this kind of evidence, as also that drawn from palæography, is rather precarious, being subject to too many possible interpretations in the hands of different persons. The greatest value of palæography and of archæology is found when they lend additional weight to direct statements in lists or in chronological texts.

If now we turn from Babylonia to Assyria, we shall find that this people, also, gave great attention to chronological details, and partly because we are nearer to them and partly because their monumental remains have reached us in a rather better condition we are able to come to conclusions generally more satisfactory than in the case of Babylonia.

II. *Assyrian Chronological Material.*

1. The Assyrians early constructed an *Eponym Canon,* in which were set down the names of the chief officers of the state in regular yearly succession. In this list the name of a new king was always entered in the year of his accession. There was thus provided an admirable method of preserving order in references to the past, and historical inscriptions, especially in a colophon at their conclusion, often mention the *limmu* or eponym of a certain year, just as they give the name of the king who was reigning. These eponyms were used therefore for dating, exactly as in later times the Greeks used archons and the Romans, consuls. A number of copies of the eponym canons must have existed, for numerous fragments have come down to us. These it has been possible to piece together in the correct order largely by means of the Canon of Ptolemy, to be mentioned below. When so arranged the parts which have come down to us extend from B. C. 892, when the eponym was Ninib-sar, to B. C. 667, when the eponym was Gabbaru.[1]

2. *The Assyrian Expedition Lists.* In addi-

[1] See on the Eponym Canon in general, Schrader, *Keilinschriften und Geschichtsforschung,* Giessen, 1878, pp. 299–356, where the references to the original texts are given. The canon is published complete in Rogers, *Cuneiform Parallels,* pp. 219–226. See further upon it C. Brockelmann, *Wesen und Ursprung des Eponymats in Assyrien, Zeitschrift für Assyriologie,* xvi (1902), pp. 389, ff., and compare Bezold, *Ninive und Babylon,* p. 78, ff. The Eponym Canon was first discovered by Sir Henry Rawinson in 1862. See *Athenæum,* No. 1805, May 31, 1862, pp. 724, ff.

tion to the Eponym Canon, which is characterized by lists of names only, the Assyrians drew up supplementary lists in which the names of eponyms were also given, and by the side of each name were added short notices of important events that fell in his year, such as expeditions to certain countries for the purpose of conquest. The fragments of this list which have come down to us begin during the reign of Shalmaneser III (859–824 B. C.), and brief though they are, have proved of immense importance. On one of these fragments, by the side of the Eponym Pur(ilu) Sa-gal-e, there is mentioned an eclipse of the sun under these words, "In the month of Sivan there was an eclipse of the sun." Astronomical investigations have shown that a total eclipse of the sun occurred at Nineveh June 15, 763 B. C., lasting two hours and forty-three minutes, with the middle of the eclipse at 10:05 A. M. This astronomical calculation gave a fixed date for the year of that eponym and thereby fixed every year in the entire canon.[1]

3. *Synchronistic History.* In addition to these important lists we have also lists of the synchro-

[1] On these Expedition Lists see again Schrader, *op. cit.*, and also Winckler, *Keilinschriftliches Textbuch zum Alten Testament*, Leipzig, 1892, pp. 61–67. Also Schrader, *Cuneiform Inscriptions and the Old Testament*, ii, pp. 178, ff.; *Keilinschriftliche Bibliothek*, Berlin, 1889, vol. i, pp. 204, ff. They are published complete, under the title "Eponym List with Notes" in Rogers, *Cuneiform Parallels*, pp. 226–238, and are republished with further improvements by A. T. Olmstead, *The Assyrian Chronicle*, Journal of the American Oriental Society, vol. 34, pp. 1–25. A most valuable critical study.

nisms between Babylonia and Assyria, beginning with the peace treaties between Karaindash, king of Babylon, and Asshur-bel-nisheshu, king of Assyria. This synchronistic history is written in the style of brief chronicles, and is, also, unhappily fragmentary.[1]

Besides these lists and chronicles which were made for chronological purposes, there have also come down to us in historical inscriptions certain references which are valuable for chronological purposes. These may be conveniently enumerated as follows:

4. The statement made by Sennacherib (see under Babylonia No. 13, pp. 498, f.), from which we recovered the date 1107 in the reign of Marduk-nadin-akhe, is useful, also, for the chronology of Assyria, for from it we obtain the date 1107 as falling in the reign of Tiglath-pileser I.

5. From the inscriptions of Sennacherib, and from the same period of his reign, there has come to us a note that assists in locating an early Assyrian king. At Babylon Sennacherib found a seal of Tukulti-Ninib with a brief inscription, to which he added an inscription of his own, so that the whole stood as follows:

"Tukulti-Ninib, king of the world, son of Shalmaneser, king of Asshur, booty from the land of

[1] The synchronistic history is first published entire by F. E. Peiser and Hugo Winckler in *Keilinschriftliche Bibliothek*, i, pp. 194, ff. See also Delitzsch, *Abhandlungen der königl. Sächs. Gesellschaft der Wiss. Philolog-hist. Klasse*, xxv, i, p. 41, f.

Kardu[-nishi]. Whoever alters my writing and my name, may Ashur and Adad destroy his name and land. This seal the enemy carried away from Asshur to Accad.

"Sennacherib, king of Asshur, after six hundred years conquered Babylon, and brought it away from the possessions of Babylon."[1]

If we add to 689, the date of the destruction of Babylon, this six hundred years, we get the date of 1289 as falling somewhere within the reign of Tukulti-Ninib.

6. In the inscriptions of Tiglathpileser I appears this note concerning two of the early Assyrian rulers:

"At that time the temple of Anu and Adad, the great gods my lords, which in former times Shamshi-Adad, *patesi* of Asshur, son of Ishme-Dagan, *patesi* of Asshur, had built, for six hundred and forty-one years had been falling down. Ashurdan, king of Assyria, son of Ninib-apal-esharra, king of Assyria, had torn down that temple, but had not rebuilt it; for sixty years its foundations had not been laid."[2]

If now the date of Tiglathpileser is correctly determined above under No. 4, the addition of sixty years to it will give the date 1167 as falling within the reign of Asshurdan and 1808 as falling in the reign of Shamshi-Adad. As the

[1] III. R. 4, 2. Com. *Keilinschriftliche Bibliothek*, i, p. 11, No. 1. Compare King, Tukulti Ninib, pp. 106, ff.

[2] I. R. 15, col. vii, lines 60–70. Com. *Keilinschriftliche Bibliothek*, i, p. 43, and *Records of the Past*, new series, i, p. 117.

date from which Tiglathpileser reckoned backward is not certainly known, these dates may vary a few years in either direction, but will probably be a little higher.

7. Shalmaneser I[1] mentions Irishum, priest of Asshur, as reigning one hundred and fifty-nine years before Shamshi Adad (II) who in turn reigned five hundred and eighty years before his own date. This would give the dates 1880 for Shamshi-Adad II and 2039 for Irishum. The former may be brought into reasonable accord with the other facts known to us. The latter seems at present impossible to reconcile with the Babylonian synchronisms. (See below, p. 539.)

8. An inscription of Esarhaddon found at Asshur[2] gives Ushpia as the first builder of the temple of Ashur, and then mentions Irishum, son of Ilushuma after whom one hundred and twenty-six years elapse and the temple is rebuilt by Shamshi-Adad, son of Bel-kabi. After that four hundred and thirty-four years pass to the destruction by fire, and the mention of Shalmaneser I (col. II, end line). If now Shalmaneser I be about 1300 B. C., this would give the date of Shamshi-Adad (II) son of Bel-kabi as about 1734 B. C., and Irishum as about 1860. It is at present impossible to reconcile these

[1] Stone inscription of Shalmaneser I, col. iii, 33–41. Messerschmidt, *Keilschrifttexte aus Assur*, No. 13, pp. 18*, ff. Translated by Luckenbill, *American Journal of Semitic Languages*, xxviii, pp. 185, ff.

[2] *Mitteilungen der Deutschen Orient Gesellschaft*, No. 25, p. 23. The text is published in Messerschmidt, *op. cit.*, No. 51, p. 50*.

dates with those otherwise secured, which have just been mentioned under No. 7.

9. Another text of Esarhaddon[1] gives the period between Shalmaneser I and himself as only five hundred and eighty years. This would place Shalmaneser I about 1260 B. C., and make still more difficult the dating of Irishum.[2] With these dates the special allusions in Assyrian historical inscriptions, which are important for our purpose, come to an end.

It remains now only that we turn to those sources outside of the Babylonian and Assyrian inscriptions, which contain chronological material, which may be of importance in its bearing upon the native sources. Of these the first in importance which comes to us from the Greeks is in reality simply Babylonian, for it is based upon Babylonian documents originally.

B.—Greek Writers

I. *Berossos.* We have given attention above to the use of Berossos as a source for the history, and we must now turn to his chronological tables. In these is found one of the most difficult problems with which the chronologist has to deal. As has already been shown, the *Babyloniaca* of Berossos was divided into three books. The first book described the origin of the world and of man and continued down to

[1] *Mitteilungen der Deutsche Orient Gesellschaft*, No. 36, p. 29.

[2] But compare Schnabel, *Mitteilungen der Vorderasiatische Gesellschaft*, 1908, i, p. 67, who would accept it.

the deluge. The second described the deluge and perhaps came down into the historical period; and the third book was devoted to the historical period.

The manner in which Berossos has come down to us has been already described, and that mistakes could easily creep in during such a process may readily be seen. In no particular would mistakes be more likely to appear than in the lists of figures in his chronological lists, and as a matter of fact, the mistakes are indeed very evident. If we take up these books in order, we shall speedily see what material, if any, of value may be found in them. According to Berossos there reigned before the flood ten kings during a period of one hundred and twenty sars. The list as it has come to us is as follows:

Alorus	10 sars	Daonus	10 sars
Alaparus	3 sars	Evedoranchus	18 sars
Almelon	13 sars	Amempsinus	10 sars
Ammenon	12 sars	Otiartes	8 sars
Amegalarus	18 sars	Xisuthrus	18 sars

The sar is 3,600 years; that is, these kings reigned 432,000 years. As these statements have come down to us both in Eusebius and in the Syncellus, they may be regarded as certainly coming from Berossos.

We must now turn to the lists of Berossos which summarize the period after the flood to see whether from them there may be educed any system to be brought into relation with the materials supplied to us by the cuneiform texts.

The dynasties of Berossos after the flood as they have come down to us are these:

I Dynasty.	86 Kings after the Flood.....	34,090 years
II Dynasty.	8 Median Usurpers.....	224 years
III Dynasty.	11 Kings.....	48 years
IV Dynasty.	49 Chaldeans.....	458 years
V Dynasty.	9 Arabians.....	245 years
VI Dynasty.	45 Kings.....	526 years

The first dynasty is mythical, and Eusebius has preserved for us only the names of the first two kings Euechoios, who ruled four *ners*, or fourteen hundred and forty years, and Chomasbelos, who ruled four ners and five soses, that is, seventeen hundred and forty years. There is no need to spend time or discussion over these. The other dynasties look rather more promising and deserve attention.

It will be well to begin with the end of this list, with the last king of dynasty VI. Immediately upon the five hundred and twenty-six years ascribed to this dynasty Eusebius continues: "After whom, says he [that is, Alexander Polyhistor, the excerpter of Berossos], there appeared a king of the Chaldeans, who had the name Phulus." Now we know that the Babylonian chronologists began a dynasty with Nabumukin-zer in 731 B. C., who was overthrown by Tiglathpileser IV shortly afterward, when the latter became king of Babylon under the name of Pulu. This latter is quite clearly the Phulus of Eusebius. This agrees perfectly with the Ptolemaic Canon[1] which sets Chinzer and Poros

[1] See below, p. 514.

together, assigning five years to their combined reign. Chinzer is the Babylonian Nabu-mukinzer and Poros is Pulu. We seem therefore quite clearly justified in the supposition that Berossos began his seventh dynasty with the year 731.[1] The close of the period which then begins is the end of the Persian dynasty when Alexander the Great in November–December, 331, became its master. This gives four hundred and one years to add to the dynasties of Berossos. If, now, we add these together, from the second dynasty of 224 years to the end of these 401 years, we shall find that the total is 1,902 years, and 1,902 years reckoned backward from Alexander the Great's taking of Babylon brings us to 2232 B. C., as the first year of Berossos's second dynasty, that is, to the first year of the first historical dynasty of Babylon. The result is quite the same, of course, if we assume that the date at which the dynasties end is the death of Alexander the Great, which occurred in 323 or 322; we shall then merely have to add 409 years.

It is most curious to observe that if we do make the period end with the death of Alexander the Great and add 409 years, the sum total comes out at 36,000 years thus:

I Dynasty	34,090 years
II Dynasty	224 years

[1] This suggestion, which greatly clears up the vexed question, is due to Eduard Meyer, *Das chronologische System des Berossos, Beiträge zur alten Geschichte*, iii, p. 131, ff. Compare also P. Schnabel, *Die babylonische Chronologie in Berossos' Babyloniaka Mitteilungen der Vorderasiatischen Gesellschaft*, 1908, No. 5.

III	Dynasty	48 years
IV	Dynasty	458 years
V	Dynasty	245 years
VI	Dynasty	526 years
VII	From Pulu to Alexander	409 years
		36,000

This would correspond quite perfectly with the method of reckoning which appears in the list of the kings before the flood, which, as we have seen, is 432,000 years, or 120 sars. The number 36,000 is quite obviously 10 sars. This may perhaps be regarded as, in a measure, confirming the explanation of the list and its completion with the number 409.

It seems, therefore, to be clear that Berossos began the historical period with the year 2232 B. C., and the problem before us is to ascertain whether this may be useful when we come to gather together all the data from the cuneiform texts, which have already been set forth in the preceding pages. The most natural supposition surely is that the dynasty with which Berossos meant to begin is the first dynasty of Babylon, and we may therefore place it there in the chronological tables. It would, however, be idle to pretend that any real assurance may be felt that this is conclusive. The chronology remains doubtful, do what we may.

It is believed by some scholars (Lehmann, Rost, Marquart) that the date 2232–2231 is confirmed from another Greek source, and this must be considered.

Simplicius in his commentary upon Aristotle's treatise, Περὶ οὐρανοῦ (De Caelo), says that Callisthenes had been asked by Aristotle to send to Greece any records of astronomical observations which he might find in Babylon. This Callisthenes did, after entering Babylon with Alexander the Great in the autumn of 331 B. C. Upon the authority of Porphyrius, Simplicius avers that Callisthenes found such observations extending back for 31,000 years.[1] There is, however, grave doubt about this figure. A Latin translation by Moerbeka (about 1271 A. D.) reads 1903, which is in itself more reasonable. Furthermore, the reading 31,000, assuming it to be an error, can readily be explained on palæographical grounds.[2] Lehmann therefore insists that the reading 1903 is original, and proposes to use it as dating backward from 331 B. C., which would yield 2233 B. C. as the date of the beginning of the observations. This would agree remarkably well with Berossos, and so confirm it from the astronomical side. But whatever value may be attached to the chronological calculations which have thus been preserved, it must be finally admitted that it is utterly impossible to reconcile this scheme with that which has been preserved for us by the

[1] *Simplicii in Aristotelis "De Caelo" commentario.* Consilio et autoritate Academiae Litterarum Regiae Borussicae editit J. S. Heiberg, Berlin, 1894, p. 506, line 14.

[2] See the discussion in Lehmann, *Zwei Hauptprob.*, p. 109, and especially the palæographical observations of Professor Diels on p. 110, and the Nachträge on p. 210.

Babylonian King Lists and Chronicles. We do not find the same divisions of dynasties in the latter, nor do we understand who are meant by the Median, Chaldean, and Arabian usurpers and kings. The learned and ingenious efforts made by Hommel[1] to reconcile them are not generally regarded as at all successful, nor have later attempts been any more fruitful. Like a number of other problems, this must be left unsolved, at least for the present.

II. *The Canon of Ptolemy.* Among the works left by Claudius Ptolemæus, an eminent Egyptian astronomer, mathematician, and geographer who lived in the second century A. D., is a Κανὼν βασιλέων (Canon of Kings), a catalogue of Babylonian, Persian, Greek, and Roman kings. It is impossible now to determine the origin of this remarkable list. When tested by the native monuments it has in every case stood the test, and was extremely valuable in the early work of the decipherment, for by its use the order of the kings was first established. It begins with Nabonassar and extends to Alexander the Great. It was plainly made for astronomical, and not for historical purposes, and therefore only contains the names of those kings who began to reign with the beginning of a year and continued to its end. Kings who came to the throne after the beginning of the year and reigned but

[1] Hommel, *Semiten*, i, pp. 329, ff. Compare in opposition to these attempts Tiele, *Geschichte*, i, p. 109, and Winckler, *Untersuchungen z. altorientalische Geschichte*, 3, ff.

a few months are not named at all. For purposes of comparison the Canon of Ptolemy, with the Babylonian names, may here be set down.

THE BABYLONIAN CANON OF RULERS IN CLAUDIUS PTOLEMÆUS.[1]

Length of Reign.	Greek Forms of Names.	Babylonian Forms of Names.	Years B. C.
14	*Ναβονασσάρου*	Nabu-nasir	747
2	*Ναδίου*	(Nabu)-nadin-(zir)	733
5	*Χίνζηρος και Πώρου*	Ukinzir. Pulu	731
5	*Ἰλουλαίου*	Ululai	726
12	*Μαρδοκεμπάδου*	Marduk-apal-iddin	721
5	*Ἀρκεάνου*	Sharrukin	709
2	*ἀβασιλεύτου πρώτου*	.....	704
3	*Βηλίβου*	Bel-ibni	702
6	*Ἀπαραναδίου*	Ashur-nadin-shum	699
1	*Ῥηγεβήλου*	Nergal-ushezib	693
4	*Μεσησιμορδάκου*	Mushezib-Marduk	692
8	*Ἀβασιλεύτου δευτέρου*	.....	688
13	*Ἀσαριδίνου*	Ashur-akh-iddin	680
20	*Σαοσδουχίνου*	Shamash-shum-ukin	667
22	*Κινιλαναδάνου*	Kandalanu	647
21	*Ναβοπολασσάρου*	Nabu-apal-usur	625
43	*Ναβοκολασσάρου*	Nabu-kudurri-usur	604
2	*Ἰλλοαρου-δάμου*	Amel-Marduk	561
4	*Νηρικασολασσάρου*	Nergal-shar-usur	559
17	*Ναβοναδίου*	Nabu-na'id	555

This single brief list far exceeds in value all that remains of Berossos, and indeed all the chronological material in all the other Greek sources.

C.—EGYPTIAN INSCRIPTIONS

From the Egyptian inscriptions comparatively little of value has been secured for the chro-

[1] For this list see primarily *Table Chronologique des Regnes . . . des C. Ptolémée*, etc., par M. l'Abbé Halma, *Ouvres de Ptolemée*, tom. iii, Paris, 1819, p. 3, and compare Georgius Syncellus, ed. Dindorf, Bonn, 1829, vol. i, pp. 390, ff., and *Keil. Bibl*,. ii, pp. 290, 291. Winckler, *Keilinschriftliches Textbuch zum Alten Testament*, p. 68.

nology of the Babylonians and Assyrians. The light which the Cuneiform texts has brought to the hieroglyphic texts has proved to be far more useful than the converse. Nevertheless there are places in which the Egyptian chronological materials have proved to be very valuable for confirmation of data derived from the native Babylonian sources. This is particularly the case in the Tell-el-Amarna period.

D.—The Old Testament

Practically the same statement is true with reference to the Old Testament, the chronological materials of which were first set in their proper light through Assyrian and Babylonian discoveries.

If now from all these sources we essay the making of a chronological table for Babylonia and Assyria, it must be admitted that with respect to the former, at least, the result is not encouraging. Every effort to make all the facts which have come down to us dovetail accurately together has failed. These facts can be reconciled only by supposing error somewhere. Every investigator differs from every other as to the place in which he finds the errors, yet each feels confident that he has found the correct solution. For the present it seems unwise to attempt to draw up a hard and fast list of kings in the early centuries by means of a system which rests on the acceptance of figures from some ancient

documents and the rejection of figures from others. The only scientific course would seem to be to decline to force these figures into agreement, but simply to put down those which seem reasonably well attested, and to indicate those places in which they are in conflict with other figures. This we proceed to do, accompanying the dates in some cases with references to the sources enumerated above, and with explanations of the discrepancies. We begin here with the earliest known period. The earliest dynasties as far as the end of the first dynasty of Babylon will be found upon the accompanying insert.

SECOND DYNASTY

DYNASTY OF THE SEA LAND

Iluma-ilu (60) 2087–2027 B. C.
Itti-ili-nibi (55) 2027–1972
Damik-ilishu (36) 1972–1936
Ish-ki-(bal) (15) 1936–1921
Shushshi (27) 1921–1894
Gulkishar (55) 1894–1839
Peshgal-daramash (50) 1839–1789
Adara-kalama (28) 1789–1761
Akur-ulanna (26) 1761–1735
Melam-kurkurra (7) 1735–1728
Ea-gamil (9) 1728–1719

This dynasty is here begun at 2087, because of the synchronism with Samsu-iluna and Abeshu. It is unfortunate that we do not know in what year these struggles began, else should we be able to approximate more closely the date of the beginning of the dynasty.

A boundary stone of Ellil-nadin-apli (see above

Kish	Lagash	Erech, Ur, Larsa, and other cities
Utug, *patesi* c. 3400 B. C.		
Ursage		
Me-silim, *king*	Lugal-shag-engur, *patesi*	
Lugal-tar-si		
Enbi-Ishtar[1]	Badu, king	
	Enkhegal, king	
	Ur-Nina, king	Enshagkushanna, lord of Sumer
	Akurgal, king	
Al[. . . .] king of Kish Zuzu, king of Opis	Eannatum, *patesi* and king	Ush, p. Enakalli, p.
Dynasty of Opis:		
Unzi (30 years)	Enannatum I, p.	Urlumma, son
Undalulu (12)		
Ur-sag (6)	Entemena, p.	Ili
Ba-sha-sahan[2] (20)		
Ishuil (24)	Enannatum II, p.	
Shu-Enzu (7)		
6 kings reigned 99 years	Enetarzi, p.	
Dynasty of Kish:		
Azag-Bau (14?)	Enlitarzi, p.	
Basha-Enzu (25)		Ukush, p.
Ur-Zamama (6)	Lugal-anda, p.	
Zimudar (30)		
Uziwidar (6)	Urukagina, k.	Lugal-zaggisi, king of Erech and Sumer
Elmuti (11)		
Igul-Shamash (11)		Lugal-kigub-nidudu, king of Erech and Ur.
Nini-yah (3)		
8 kings reigned 106(?) years		Lugal-kisalsi, king of Erech and Ur.
Lugal-zaggisi, king of Ur 25 years		
Dynasty of Agade:		
Sharrukin, king. cir. 3000 B. C.		
[Sargon]		
Manishtusu	En-gilsa, p.	Kur-shesh, p. of Umma
Urumush[3]		

p. 490), gives a computation of the chronologists of his period, which dates Gulkishar at six hundred and ninety-six years before Nebuchadrezzar I. This would yield a date 1846 B. C. for Gulkishar, which falls within the reign as indicated above.

Ea-gamil, the last king of this dynasty, was defeated by Ulam-buriash, a brother of Kash-tiliash, the third king of the next dynasty. (*Chronicle concerning early Babylonian rulers*, reverse lines 11, 12. King *Chronicles* etc. II, pp. 22, 23. See above, p. 484.)

THIRD DYNASTY

KASSITES

1. Gandash (16) 1757–1741 B. C.
2. Agum I (22) 1741–1719
3. Kash-tiliash I (22) 1719–1697
4. Ush-shi (8) 1697–1689
5. Abi-rattash
6. Tazzi-gurumash

Agum II
(Lacuna of uncertain length)
Burnaburiash I circa 1500 B. C.
Kadashman-karbe I
Kurigalzu I
Melishipak I
Karaindash I
Kadashman-Ellil
Kurigalzu II (son)
Burnaburiash II (son) (25) 1385–1360 B. C.
Karaindash II
Kadashman-Kharbe II
Nazi-bugash (usurper)
Kurigalzu III (23) 1354–1331

23. Nazi-maruttash (son) (26) 1331–1305
24. Kadashman-Turgu (son) (17) 1305–1288
25. Kadashman-Ellil (6) 1288–1282
26. Kudur-Ellil (son) (9) 1282–1273

27. Shagarakti-Shuriash (son) (13) 1273–1260
28. Kashtiliash II (son) (8) 1260–1252
29. Ellil-nadin-shum (son) (1½) 1252
30. Kadashman-Kharbe II (1½) 1250
31. Adad-shum-iddin (6) 1249–1243
32. Adad-shum-usur (30) 1243–1213
33. Meli-shipak II (son) (15) 1213–1198
34. Marduk-pal-iddin (son) (13) 1198–1185
35. Zamama-shum-iddin (1) 1185
36. Ellil-nadin-akhi (3) 1184–1181

[36 kings reigned 576 years]

The names in this list still offer many difficulties to the historian and chronologist. Yet the last decade has provided considerable fresh illumination of some of the difficulties, and gives encouragement for future study.

The date for the beginning of the dynasty is approximately afforded by the synchronism of Eagamil and Kashtiliash already mentioned (p. 517). The names from 1 to 6 with the number of years of reign in each case, are derived from the King List A. From the same list are derived the names, and number of years of reign, from No. 23 to 36 inclusive, as well as the summation which assigns thirty-six kings and five hundred and seventy-six years to this dynasty. The names which have been added from other sources are left without numbering, and the grounds for their arrangement as here set down may now follow.

1. Burnaburiash I is here placed because we know from the Synchronistic History (I, 16f.) that a Burnaburiash made a treaty with Puzur-Ashir of Assyria, who reigned about 1500 B. C.

2. Kadashman-Kharbe I and his son Kurigalzu I are both known to us from a *Kudurru* or Boundary Stone of the time of Kadashman-Ellil, in which they are specifically mentioned.[1]

3. Kurigalzu I and his son Melishipak I, are known from a small button of reddish marble found by the Deutsche Orient Gesellschaft at Babylon,[2] though it does not give a conclusive decision as to the period to which it belongs. It is clear, however, that the Meli-shipak which it mentions cannot be the king No. 33 in the list, who is son of Adad-shum-usur.

4. Karaindash I is contemporaneous with Ashir-bel-nisheshu of Assyria. (*Synchronistic History* i, 1–4.)

5. Kadashman-Ellil was a contemporary of Amenophis III, king of Egypt, and in the very early part of his reign, for his son Kurigalzu II and Burnaburiash II, were also contemporaries of the same king. The date of Amenophis III can now be very closely approximated through the final determination of the date of Thotmes III by astronomical means,[3] as 1501–1447.

The dates of his successors would then be approximately these: Amenophis II, 1447–1421, Thotmes IV, 1421–1413, and Amenophis III, 1413–1377 B. C. Kadashman-Ellil is the king whose name was originally read Kalimma-Sin,

[1] The text is British Museum No. 91036, see King, *Babylonian Boundary Stones and Memorial Tablets in the British Museum* (1912), pp. 3, 4.

[2] B. E. 6378, Weissbach, *Babylonische Miscellen*, pp. 2–6.

[3] Eduard Meyer, *Aegyptische Chronologie*, p. 46, ff.

and afterward quite commonly read Kadashman-Kharbe. It has now been shown[1] that the name of this king is to be read Kadashman-Ellil, as indeed the signs in the El-Amarna tablets really are. Between Kadashman-Ellil and Amenophis III there passed five letters which have been preserved.[2]

6. Kurigalzu II is sufficiently identified as the father of Burnaburiash II, in the letter written by the latter to Amenophis IV where he is clearly named as father, and is expressly stated to have been on such good terms with the Egyptians, that he refused a proposition from Canaan to unite against Egypt,[3] and had received great gifts from the Egyptian king, Amenophis III.[4]

7. Burnaburiash II seems to have been a correspondent of Amenophis III, having written to him one letter.[5] He was also a correspondent of Amenophis IV, and five letters passed between them. He speaks of himself as son of Kurigalzu (II), as already noted, and one of his forbears is mentioned under the name of Karaindash. This is Karaindash I in this list. Burnaburiash II refers to the Assyrians as subject to him (Letter 9, line 31), but unhappily does not mention the contemporaneous Assyrian

[1] King, *Babylonian Boundary Stones*, p. 3, footnote 1.

[2] J. A. Knudtzon, *Die El-Amarna Tafeln*, pp. 60–77.

[3] Letter No. 9, line 19, ff. (Knudtzon, pp. 88, ff.). See also note by Weber, in Knudtzon, p. 1028.

[4] Letter No. 11, line 19, f. (Knudtzon, pp. 98, 99).

[5] Letter No. 6 (Knudtzon, pp. 78, 79).

king. This would have been useful in Assyrian chronology.

8. Karaindash II married Muballitat-Sherua, daughter of Ashuruballit II, king of Assyria (*Babylonian Chronicle* P, line 5, ff.), and of this union was born Kadashman-Kharbe II, as this same chronicle indicates. The next king in the list, Nazibugash, was an usurper and was overthrown by Ashuruballit, in the interest of Kurigalzu III, son of Kadashman-Kharbe II, and therefore his own grandson. From this point onward we come upon much more solid chronological foundations, for all the following names are found upon the King List. Kurigalzu III is mentioned also upon a Kassite Document as the son of Kadashman-Kharbe and the father of Nazimaruttash.[1]

From this point there is no further doubt of the order of the names. We need only to follow the King List, and there is also little doubt about any of the names as to their form. A few notes only need be written about the chronological computations and synchronisms.

9. It is unfortunate that the date assigned by Nabonidus to Shagarakti-Shuriash (see above, p. 493), which works out at 1350 B. C., cannot be brought into closer agreement with the date here assigned, which is 1273–1260 for this king.

[1] Clay, *Temple Archives of Nippur*, xiv, No. 39. It is translated by Luckenbill, *American Journal of Semitic Languages*, xxiii, p. 292. Compare also Ungnad, *Orientalistische Litteraturzeitung*, 1908, col. 11, 12.

The numeral 800 is quite obviously a round number, and we must be content with this comfort, such as it is.

10. Kashtiliash II, the son of Shagarakti-Shuriash, was a contemporary of Tukulti-Ninib of Assyria, as the Chronicle P expressly records his defeat by the Assyrian king.[1] From the reference in the Chronicle and in the inscription of Tukulti-Ninib himself, it would appear that after Tukulti-Ninib had defeated the Babylonian king he returned to Nineveh, but came back to Babylon over which he held suzerainty for seven years, while Kadashman-Kharbe II and Adad-shum-iddin bore the title of king of Babylon, the former for one and one half years, the latter for six years.[2]

11. Ellil-nadin-shum according to Chronicle P (col. IV, lines 14–16), made a victorious assault upon the Elamite king Kidin-Khudrudash; and the same Chronicle (col. IV, lines 17, ff.) mentions Adad-shum-iddin as at war with the same king. The name of Adad-shum-iddin as king also occurs in a Babylonian boundary stone of Meli-shipak II,[3] which also connects Melishipak as the son of Adad-shum-usur.

12. Meli-shipak is testified to be the father

[1] Chronicle P, col. iv, lines 1, ff. See the text as republished by King, *Records of the Reign of Tukulti-Ninib* (1904), pp. 96, ff.

[2] Compare Schrabel, *Mitteilungen der vorderasiatischen Gesellschaft*, 1908, p. 41, f.

[3] British Museum No. 90827, formerly No. "103," published by King, *Babylonian Boundary Stones*, 1917, pp. 7, ff.

of Marduk-aplu-iddin in a boundary stone[1] of the latter, who also denominates himself a descendant of Kurigalzu, "a king beyond compare."

13. Zamama-shum-iddin suffered an invasion at the hands of Ashur-dan king of Assyria (Synchronistic History, col. II, line 9).

14. Ellil-nadin-akhi, or Ellil-shum-usur, as the name may also be read, was the last king of the dynasty, and was the contemporary of the Elamite king Kutur-nakhunte II, son of Shutruk-nakhunte I.

FOURTH DYNASTY

THE DYNASTY OF ISIN

1. Marduk-[. . . . . ?] (18) 1180–1162 B. C.
2. [. . . . .] (6) 1162–1156
3. Nebuchadrezzar (16+) 1156–
4. Ellil-nadin-apli (4+)
5. Marduk-nadin-akhi (13+) 1116–
6. Itti-Marduk-balatu ( )
7. Marduk-shapik-zer-mati ( )
8. [Adad-apal-iddin, usurper, son of Itti-Marduk-balatu (22)
9. Marduk-[. . ? . . . (1 year, 6 mos.)
10. Marduk-[. . . ? . . . (13) 1069–1056
11. Nabu-shum-libur (9) 1056–1047

11 kings reigned 132½ years

For the arrangement of the fourth dynasty our materials are exceedingly scanty. The King List A is badly broken and but little can be made out of it. The first name is almost entirely destroyed, but the number of years is certainly fixed at 18. The numeral 6 attached

[1] British Museum No. 90850, King, *Babylonian Boundary Stones*, pp. 24, ff.

to the second king appears also to be certain. From a monument of his own Nebuchadrezzar I is known, and Ellil-nadin-apli from a boundary stone. Marduk-nadin-akhe is known from Assyrian synchronisms, and the years of reign, 22, appear upon the King List A. The location of Marduk-akhe-irba is exceedingly doubtful, but the numeral 1 year and 6 months is on the King List, as are also the numerals 12 (?13) and 9 which follow. The reasons for the location of the remaining kings are given below.

The length of this dynasty has usually been given, on the basis of the King List, as 72 years and 6 months, but by a simple calculation Peiser proved that this was impossible, and suggested that it must be 132 years.[1] After an examination of the passage he became convinced that it must be 132, and with this Knudtzon[2] agrees, as does also Lehmann, though the latter thinks that 133 is possible.[3] The date of Marduk-nadin-akhe is made clear by the allusion of Sennacherib (see above, p. 498). The date of the beginning of the dynasty is most closely approximated by the synchronisms already set forth in connection with the third dynasty.

From the Synchronistic History are derived notes of much value, and some of these find interesting confirmation and also some minor contradiction in the chronicle from the Eleventh

[1] ZA vi, 268, ff. [2] Knudtzon, *Assyrische Gebete*, i. p. 60; ii, p. 277.
[3] Lehmann, *Zwei Hauptprobl.*, pp. 14, 15.

to the Seventh Century B. C. (See above, p. 486.)

1. The Synchronistic History supplies us with a synchronism between Nebuchadrezzar and Ashurreshishi, king of Assyria (col. II, lines 1–13). This statement may be brought into most interesting relationship with a synchronism already established in the third dynasty. There we have seen that Zamama-shum-iddin was conquered by Ashur-dan. Now from Tiglath-pileser I (Prism, col. VII, lines 36–59[1]), we know that he could trace his lineage directly to Ninib-apal-esharra, contemporary of Marduk-apaliddin, father of Zamama-shum-iddin. His line stood thus:

Ninib-apal-esharra
Ashur-dan I, son,
Mutakkil-Nusku, son,
Ashur-resh-ishi I, son.
Tiglathpileser I, son

We have therefore these synchronisms in rapid succession:

Babylonia		Assyria
Marduk-apal-iddin	———	Ninib-apal-esharra
Zamama-shum-iddin	———	Ashur-dan I
Nebuchadrezzar I	———	Ashur-resh-ishi I

This interlocking of the historical data assures the order of the Babylonian kings and their relative position in time as well.

2. Itti-Marduk-balatu appears in the chron-

[1] Budge and King, *The Annals of the Kings of Assyria*, i, pp. 92–94.

icle from the Eleventh to Seventh Century (Obv. line 8),[1] as the father of Adad-apal-iddin the usurper, but the Synchronistic History (col. II, line 31) makes the latter a "son of Esagil-shadûni, the son of a nobody."

3. Marduk-shapik-zer-mati was a contemporary of Ashur-bel-kala, King of Assyria, son of Tiglathpileser I, as the Synchronistic History (col. II, lines 25–36) recounts, and the chronicle from the Eleventh to Seventh Century confirms (Obv. lines 4–6).[2] Marduk-shapik-zer-mati was, however, slain and Adad-apal-iddin son of Itti-Marduk-balatu became king, and reigned twenty-two years according to the King List. His daughter was married to Ashurbelkala (Synchronistic History, col. II, lines 33–35), and the record of this supplies another synchronism between Babylonia and Assyria.

4. The next two kings on the list have names beginning with Marduk, the latter part of both names having disappeared from the King List. The supplying of these names from other sources is a most interesting albeit difficult and uncertain problem. It is to be noted that after the names above given are supplied there yet remain four places to be supplied, and of these, three have names beginning with Marduk. For one of these places the name of Marduk-akhe-erba is available. This king is known from a Boundary Stone, whose provenance and present

[1] King, *Chronicles*, etc., ii, p. 59. [2] King, *Chronicles*, ii, pp. 57, 58.

location are alike unknown, though it may now be in Constantinople.[1]

This king cannot be No. 10, for on the King List the sign which immediately follows Marduk seems to be MU or ZER. On the other hand the sign in No. 9 may be šiš = akhi, and therefore Marduk-akhe-erba may perhaps here be introduced. Schnabel proposes this king rather for place No. 1. There is at present insufficient evidence for any positive conclusion.

5. The last king of this dynasty is certainly identified at Nabu-shum-libur. The latter part of the name (MU-libur) appears in the Religious Chronicle (col. I, line 16).[2] The whole name appears on a weight in the form of a Duck, in the British Museum as Nabu-shum-libur, and the identification is complete.[3]

FIFTH DYNASTY

DYNASTY OF THE SEALAND

1. Simbar-shipak (18) 1046–1028 B. C.
2. Ea-mukin-zer (5 mos.) 1027
3. Kasshu-nadin-akhi (3) 1027–1024

3 kings reigned 21 years and 5 months

The names and the number of years, as well as the summation come from King List A.

1. Simbar-shipak's name also appears in the

[1] The text is published by Hilprecht, *Old Babylonian Inscriptions*, i, part 2, plates 65–67, No. 149, and *Assyriaca*, p. 33, note 1. Compare Ranke, *A New Boundary Stone of Nebuchadrezzar*, i (1907), p. xxii, No. xxvii.

[2] King, *Chronicles*, etc., ii, p. 72.

[3] King, *Proceedings of the Society of Biblical Archæology* (1907), p. 221.

Dynastic Chronicle (Reverse, col. II, lines 2, 3)[1] where, however, he is said to have reigned seventeen years. The name appears again in the chronicle from the Eleventh to the Seventh Century, obverse line 12.[2]

2. Ea-mukin-zer appears also in the Dynastic Chronicle (Reverse, col. II), where he is called an usurper and is said to have reigned but three months.[3]

3. Kasshu-nadin-akhi is also mentioned in the Dynastic Chronicle (Reverse col. II, line 7), where he is said to have reigned three years.[4] The numeral against his name in the King List was formerly read 6, in this Dynastic Chronicle, by Smith and Winckler but King corrects to 3.

SIXTH DYNASTY

DYNASTY OF BAZI

1. E-ulmash-shakin-shum (17) 1024–1007
2. Ninib-kudurri-usur (3) 1007–1004
3. Silanim-shukamuna (3 months) 1003

3 kings reigned 20 years and 3 months

The names and lengths of reign come from King List A. The names appear again in the Dynastic Chronicle (Reverse, col. II, lines 9–12),[5] where, however, the first king is credited with but 15 years, and the second with but 2, while the last has 3 months in agreement with the King List, while the summation is given as 20 years and 3 months, also in agreement with

[1] King, *Chronicles*, etc., ii, pp. 51 and 52. [2] King, *op. cit.*, ii, p. 61.
[3] King, *op. cit.*, ii, p. 52. [4] King, *op. cit.*, ii, p. 53.
[5] King, *op. cit.*, ii, p. 54.

the King List. The numerals 15 and 2 are most probably therefore scribal errors.

SEVENTH DYNASTY

ELAMITE

1. Ae-aplu-usur (6) 1003–997 B. C.

1 king reigned 6 years

The name of this king, the only one of the dynasty, is lost upon the King List, and is also lost from the Dynastic Chronicle by a curious coincidence, but has been supplied from the Babylonian Chronicle from the Eleventh to the Seventh Century (obverse line 16)[1].

EIGHTH DYNASTY

DYNASTY OF BABYLON

1. Nabu-mukin-apli (36) 996–960 B. C.
2. [. . . . . .] (? year, 8 months and 12 [?] days) 959
3. . . . . .
4. . . . . .
. . . [. . ? . .] akhe-iddin . . .
Shamash-mudammik
Nabu-shum-ishkun I
Nabu-shum-ukin I circa 889 B. C.
Nabu-apal-iddin (31+)
Marduk-zakir-shum I (11+) son 853–
Marduk-balatsu-ikbi son
Bau-akh-iddin
Interregnum
Erba-Marduk
. . . . . .
. . . . . .

NINTH DYNASTY

19. Nabu-shum-ishkun II (8+)
20. Nabu-nasir (14) 747–734
21. Nabu-nadin-zer 733–732
22. Nabu-shum-ukin II 732

22 kings

[1] King, *op. cit.*, ii, p. 62, footnote 2 and p. 55, footnote 2.

In the case of this dynasty the King List has almost completely failed us. Most of the names are quite gone from it, and at the end we are told that there were twenty-two kings in the dynasty, but the number of years that they reigned is not written.

1. The first king of the dynasty was probably Nabu-mukin-apli, known from a boundary stone[1] written in or after his twenty-fifth year, and containing allusions extending back to the second year of Ninib-kudurri-usur (Dynasty VI) and the chronicle from the Eleventh to the Seventh Century (obverse, line 17)[2] also mentions this king, and follows immediately (with, however, a line between), on the edge of the tablet with *akhi-iddin*, the end of the name of a king who probably belongs to this dynasty. Then follows, on the same chronicle, the name of Shamash-mudammik, who is synchronized with Adad-nirari III, king of Assyria, and this is confirmed by the Synchronistic History (col. III, lines 1–7), which also gives the name of his successor, Nabu-shum-ishkun I, as an adversary of Adad-nirari III (ib. col. III, lines 8–17), and later as a friend who intermarried (ib. lines 18–19) with his family.

The next king, Nabu-shum-ukin I, was a

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[1] British Museum No. 90835, formerly No. 102. King, *Babylonian Boundary Stones*, p. 51, ff.

[2] King, *Chronicles*, etc., ii, p. 62.

contemporary of Tukulti-Ninib II[1] of Assyria, and was succeeded by his son, Nabu-apal-iddin, of whom we have a stone tablet dated in the twentieth year of his reign,[2] and another[3] with an account of his re-endowment of the temple of the Sun-God at Sippar. It must be the name of this king which appears upon the chronicle from the Eleventh to the Seventh Century (Reverse, line 3) in the form [. . . ap] lu-iddina which King suggests should be restored Mardukaplu-iddina.[4] The Synchronistic History (col. II, lines 22–24) relates that Nabu-aplu-iddin made a treaty of friendship with Shalmaneser III, king of Assyria, and so furnishes us with another synchronism. He seems to have left the throne to his son, Marduk-zakir-shum, whose brother, Marduk-bel-ushate, attempted to eject him from the throne, and Shalmaneser III came to his assistance (Synchronistic History, col. III, lines 27–33). This is again a most valuable synchronism, for the dates of these campaigns of Shalmaneser III in Babylonia are definitely fixed as in 852 and 851 B. C. This gives us then 853 as the beginning of the reign of Marduk-zakir-shum.

[1] Chronicle Cent. xi to vii, Reverse line 2. In this passage only the first part of the Assyrian king's name (Tukulti . . .) is preserved. King (*Chronicles*, ii, p. 64) filled out the name as Tiglathpileser, but it should be Tukulti[-Ninib].

[2] British Museum No. 90922, King, *Cuneiform Texts*, x, pl. 3, and *ibid.*, *Babylonian Boundary Stones*, pp. 104–106.

[3] British Museum Nos. 91000–91002 and 91004. V. R. pl. 60, f., King, *Babylonian Boundary Stones*, pp. 120–127.

[4] King, *op. cit.*, p. 64.

2. The next king, Marduk-balatsu-ikbi, came into conflict with the Assyrians and was defeated by Shamshi-Adad V (Synchronistic History, col. III, lines 6–9). He appears to have been followed by Bau-akh-iddin, whose name comes next in the Synchronistic History (col. IV, lines 1–2), as having been carried away captive to Assyria, though he is not mentioned in the Dynastic Chronicle, which gives immediately (Reverse line 7) after Marduk-zakir-shum the statement: "For [. . .] years there was no king in the land." This must have been the period during which the Assyrians, probably under Shamshi-Adad V, ravaged the country (Synchronistic History, col. IV, lines 3–10), though the Assyrian king's name has been broken off from the tablet.

3. The first king after the interregnum was Erba-Marduk, son of Marduk-zakin-shum (Dynastic Chronicle, Reverse lines 8, 9).[1]

4. The 19th king in the list is probably Nabu-shum-ishkun II, though the remains of the name on the King List, which seem to be Nabu-MU-ŠA-? do not, it must be confessed, seem well to fit this hypothesis.[2]

5. With Nabunasir, the twentieth king, we are at last upon absolutely firm ground. His name is perfectly clear upon King List A., and besides this is in the Babylonian Chronicle (col. I,

[1] King, *Chronicles*, etc., ii, p. 66.

[2] See Winckler, *Forschungen*, i, pp. 354, ff., but compare Schnabel, *Mitteilungen der Vorderasiatischen Gesellschaft*, 1908, pp. 87, 88.

line 1),[1] in Berossos, and, best of all, in the Canon of Ptolemy.[2] He was a contemporary of Tiglathpileser IV of Assyria as the chronicle passage shows.

6. The next king, Nabu-nadin-zer, was a son of Nabu-nasir, and appears in the Babylonian Chronicle (col. I, line 13) as Nadinu, and upon the Canon of Ptolemy as Nadios.

7. Nabu-shum-ukin II, called Shum-ukin in the Babylonian Chronicle (col. I, line 16), ruled only two months and some (?) days, according to the chronicle, while the King List A gives him only one month and twelve days.

TENTH DYNASTY

DYNASTY OF BABYLON

1. Nabu-mukin-zer (3) 731–728 B. C.
2. Pulu (= Tiglathpileser IV) (2) 728–727
3. Ulula (Shalmaneser V) son (5) 727–722
4. Marduk-pal-iddin II (12) 722–710
5. Sargon II (5) 710–705
6. Sennacherib (2) 705–703
7. Marduk-zakir-shum (1 month) 703
8. Marduk-pal-iddin (9 months) 703
9. Bel-ibni (3) 703–700
10. Ashur-nadin-shum (son of Sennacherib) (6) 700–694
11. Nergal-ushezib (1) 693
12. Mushezib-Marduk (4) 693–689
13. Sennacherib (8) 689–681
14. Esarhaddon (13) 681–668
15. Shamash-shum-ukin (20) 668–648
16. Kandalanu (22) 648–626

Ashur-etil-ilani 626–?

Sin-shar-ishkun ?—606

The names from No. 1 to No. 16 come from King List A, which supplies also the number

[1] Rogers, *Cuneiform Parallels*, p. 208.

[2] *Ibid.*, p. 239. Also above, p. 514.

of the years of reign down to No. 13. The names are also abundantly supported in the extensive literature of the period. The synchronisms with Assyria are numerous and deserve brief notice, as also do the confirmations afforded by the Babylonian Chronicle, and the Canon of Ptolemy.

1. Nabu-mukin-zer is the Chinzer of the Canon of Ptolemy, where he is associated in rule with Poros = Pulu) and five years is assigned to this joint rule. With this also agrees the Babylonian Chronicle (col. I, lines 22 and 25) which assigns three and two years respectively.

2. Shalmaneser V has five years in the King List, which is confirmed by the Chronicle (col. I, line 30) and is supported by the Ptolemaic Canon.

3. The twelve years assigned to Marduk-pal-iddin in the King List finds confirmation in the Babylonian Chronicle (col. II, line 4) and again in the Ptolemaic Canon.

4. To Sargon II the King List assigns five years, and the Ptolemaic Canon agrees, while the corresponding passage is wanting in the Chronicle.

5. To Sennacherib the King List gives two years, the passage is wanting in the Chronicle, while the Ptolemaic Canon gives two years, but calls the period kingless—because Sennacherib had not taken the hands of Marduk, and was therefore not considered a legitimate king.

6. The short reigns of the two pretenders

Marduk-zakir-shum and Marduk-pal-iddin do not appear in the Ptolemaic Canon, and the passage is wanting in the Chronicle.

7. Bel-ibni has three years in the King List, in the Ptolemaic Canon and in the Chronicle (col. II, 29).

8. Ashur-nadin-shum has six years in King List and in the Ptolemaic Canon, and again in the Chronicle (col. II and 2, 43).

9. The Ptolemaic Canon agrees with the King List in the one year of Nergal-ushezib, but the Chronicle gives one year and six months (col. III, 5, 6).

10. All three of the authorities are agreed concerning the four years of Mushezib-Marduk (Chronicle, col. III, 23, 24).

11. The Babylonian Chronicle and the Ptolemaic Canon are agreed in counting the eight years given to Sennacherib by the King List, as kingless.

12. Esarhaddon's thirteen years (King List) are confirmed in the Ptolemaic Canon, and are not mentioned in the Babylonian Chronicle which speaks only of his reign in Assyria as twelve years (col. IV, 32).

13. Shamash-shum-ukin's twenty years are confirmed in the Ptolemaic Canon, but the Babylonian Chronicle ends without a summary of his reign.

14. Kandalanu has twenty-two years in both the King List and in the Ptolemaic Canon.

THE NEO-BABYLONIAN EMPIRE

1. Nabu-pal-usur (Nabopolassar) (21) 625–604 B. C.
2. Nabu-kudurri-usur (Nebuchadrezzar) son (43) 604–561
3. Amel-Marduk (Evil Merodach) son (2) 561–559
4. Nergal-shar-usur (Neriglissar) (brother-in-law) (4) 559–555
5. Labashi-Marduk (Labassoarchôs) 555
6. Nabu-na'id (Nabonidus) (17) 555–538

For this dynasty the evidence is ample. In the Ptolemaic Canon we have all the names, with the number of years of each reign, except for Labashi-Marduk, who was but a child, reigned but nine months and was removed by the priestly party. It is quite natural that he does not appear in the Ptolemaic Canon based upon a popular idea, which was itself based upon the priestly dictum. The inscriptions, both royal and popular, are numerous, and the dates supplied by business documents amply sustain the numbers of years assigned to the kings.

THE CHRONOLOGY OF ASSYRIA

Ushpia
Kikia
Kate-Ashir
Shalim-akhum, son
Ilushuma, son, circa 2220 B. C.
Irishum, son, circa 2039 (? See note below)
Ikunum
Sharru-ken I
Shamshi-Adad I (? order in list)
Sharru-ken-ka-te-Ashir (? order in list)
Ishme-Dagan I
Ashir-nirari I, son
Kisru(?)-sha-Ashir, son
Ashir-rabi I
Ashir-nirari II, son
Ashir-rim-nisheshu, son

Bel-ka-bi
Shamshi-Adad II, son, circa 1880
Ishme-Dagan II
Shamshi-Adad III, son, circa 1820
Ashur-nadin-akhi (? order in list)
Puzur-Ashir
Ellil-nashir, son
Ashir-rabi II, son
Ashir-nirari III, son
Ashir-bel-nisheshu, son
Erba-Adad, son
Ashur-uballit I, son
Ashur-nadin-akhi, circa 1478 B. C.
Ashur-uballit II, son, 1418(?)–1370 B. C.
Ellil-nirari, son
Arik-den-ilu, son
Adad-nirari I, son
Shulmanu-asharidu I (Shalmaneser I), son, circa 1300 B. C.
Tukulti-Ninib I, son, circa 1289 B. C.
Ashur-nazir-apli I (Ashurnazirpal I), son (? order in list)
Ashur-narara IV (? order in list)
Nabu-dan
Tukulti-Ashur
Bel-kudur-usur
Ninib-apal-esharra
Ashur-dan I, son, circa 1167 B. C.
Mutakkil-Nusku, son
Ashur-resh-ishi I, son, circa 1150
Tukulti-apal-esharra I (Tiglathpileser I), circa 1107 B. C.
Ashur-bel-kala
Shamshi-Adad IV, brother
Ashur-nasir-aplu II (Ashurnazirpal), son
Shulmanu-asharidu II (Shalmaneser II), son
Adad-nirari II
Tukulti-apal-esharra II (Tiglathpileser II), son
Ashur-rabi III
Ashur-resh-ishi II, son
Tukulti-apal-esharra III (Tiglathpileser III), son
Ashur-dan II, son
Adad-nirari III, son, 911–889
Tukulti-Ninib II, son, 889–884
Ashur-nazir-aplu III (Ashurnazirpal III), son, 884–858
Shulmanu-asharidu III (Shalmaneser III), son, 858–823

Shamshi-Adad V, son, 823–810
Adad-nirari IV, son, 810–781
Shulmanu-asharidu IV (Shalmaneser IV) 781–771
Ashur-dan III 771–753
Ashur-nirari V 753–745
Tukulti-apal-esharra IV (Tiglathpileser IV) 745–727
Shulmanu-asharidu V (Shalmaneser V) 727–722
Sharru-ken II (Sargon II) 722–705
Sin-akhi-erba (Sennacherib), son, 705–680
Ashur-akh-iddina (Esarhaddon), son, 680–668
Ashur-ban-apal (Sardanapalus), son, 668–626
Ashur-etil-ilani (-ukinni), son, (6+) 626—?
Sin-shar-ishkun (Saracus), brother? 606

1. Ushpia, the first name in the list, is known only by an allusion to his building of the temple of Ekharsagkurkurra, the temple of Ashur, by Shalmaneser I,[1] who calls him his ancestor, and denominates him priest of Ashur.

2. The names Kikia, Ikunum, Sharrukenkate-Ashir, and Ashirnirari I, son of Ishme-Dagan, are all mentioned as wall builders at Asshur, by Ashir-rim-nisheshu,[2] patesi of Asshur, and son of Ashir-nirari II, grandson of Ashir-rabi I. The order of the names Kate-Ashir, Shalim-akhum, his son, Ilushuma, his son, is established by Irishum,[3] son of Ilushuma, who names these all and gives their relationship.

3. Ilushuma was contemporary of Sumu-abu,

[1] Messerschmidt and Delitzsch, *Keilschrifttexte aus Assur, historischen Inhalts*, i, No. 13, pp. 18*, ff. Reverse col. iii, lines 32–34, translated by Luckenbill, *Inscriptions of Early Assyrian Rulers*, *American Journal of Semitic Languages*, xxviii, pp. 185, ff.

[2] Messerschmidt, *op. cit.*, No. 63, p. 59*, Luckenbill, *op. cit.*, pp. 172, 173.

[3] Messerschmidt, *op. cit.*, No. 1, p. 1. Luckenbill, *op. cit.*, pp. 166, 167.

first king of the first dynasty of Babylon. (See above, p. 483.) This would set his date about 2220 B. C. This does not agree with the note of Tukulti-Ninib I, who dates Ilushuma seven hundred and twenty years before his time. (See above, p. 500.) Nor does it agree with the date of his son Irishum as determined by Shalmaneser I, and we know no method by which they can be reconciled. As has been shown (see above, No. 9, p. 507), there are also contradictions of Shalmaneser's date, which make the case still worse. It is clear that the ancient Assyrian chronologists found difficulties, and we have not the materials wherewith to solve their doubts or to reconcile their differences.

4. Shamshi-Adad I was a contemporary of Hammurapi according to a judicial document from Sippar,[1] but as we know neither his father's nor his son's name it is impossible to place him exactly in the list.

5. Shamshi-Adad III is approximately dated by a reference made by Tiglathpileser I,[2] who calls him Shamshi-Adad patesi of Asshur (the city, or as two variants have it, Ashur the god), son of Ishme-Dagan patesi of Asshur, and goes on to state that Shamshi-Adad had built the temple of Adad six hundred and forty-one years before the time of Ashurdan, Tiglath-

[1] Ranke, *Babylonian Expedition of the University of Pennsylvania*, vi, 1, p. 9 (No. 26).

[2] Cylinder of Tiglathpileser, i, col. vii, lines 60–69. See Budge and King, *Annals of the Kings of Assyria*, i, p. 95.

pileser's great-grandfather, Ashurdan I, whom he dates sixty years before his time. If we reckon 1107 as falling in the reign of Tiglath-pileser and add to it sixty years, we shall have the year 1167 as falling within the reign of Ashurdan, and 1808 as falling in the reign of Shamshi-Adad III, though both these dates are probably twenty years too low, as we do not know the year of his reign from which Tiglathpileser reckoned. If twenty years were added to the date of Shamshi-Adad III it would approximate much more closely to the date 1880 for Shamshi-Adad II. This date cannot be reconciled with the data provided by Esarhaddon (see above, p. 506), which would locate this king as about 1734 B. C.

6. With Puzur-Ashir the contemporary of Burnaburiash I begins the long list of synchronisms with Babylonia, all of which are discussed in the notes under the Third or Kassite dynasty, where the references to the literature may be sought. For the Synchronism Puzur-Ashir and Burnaburiash, see above, p. 518.

7. Ashur-bel-nisheshu is a contemporary of Karaindash I of Babylonia. See above, p. 519.

8. Ashuruballit II was contemporaneous with Karaindash II, Kadashman-Kharbe II and Nazibugash. See above, p. 521.

He was in correspondence with Amenophis IV, king of Egypt, and two of his letters have

been preserved.[1]. His reign must have ended about 1370 B. C., and was probably very long. It may have begun even as early as 1418 B. C.[2]

9. For the date of Shalmaneser I see above, pp. 506, 507.

10. For the date of Tukulti-Ninib I, see above, p. 505, and note also that he was a contemporary of Kashtiliash II, see p. 522.

10. For the date of Ashurdan I see p. 505, and note also that he was contemporaneous with Zamama-shum-iddin. See p. 525.

11. Ashur-resh-ishi was the contemporary of Nebuchadrezzar I of the dynasty of Isin. See p. 525.

12. Ashur-bel-kala was contemporaneous with Marduk-shap-zer-mati and Adad-apal-iddin. See p. 526.

13. Adad-nirari III is contemporaneous with Shamash-mudammik. See p. 530. At this time the Assyrian Eponym List begins, and shortly places us upon sure chronological foundations.

14. Tukulti-Ninib II is contemporaneous with Nabu-shum-ukin I of Babylonia. See p. 531.

15. Shalmaneser III was a contemporary of Nabu-aplu-iddin of Babylonia. See p. 531.

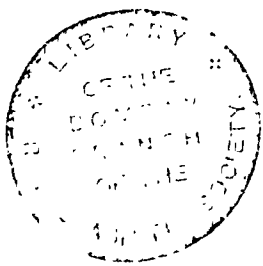
16. Shamshi-Adad V was a contemporary of Marduk-balatsu-ikbi, king of Babylonia. See p. 532.

[1] Knudtzon, *Die El-Amarna Tafeln*, Nos. 15, 16, pp. 124–131.

[2] So Schnabel, *Mitteilungen der Vorderasiatischen Gesellschaft*, 1908, p. 36 Compare also Weber's notes in Knudtzon, *op. cit.*, p. 1036.

17. Tiglathpileser IV was a contemporary of Nabunasir, king of Babylonia. See p. 533.

The dates of the remaining kings seem to be as certain as ancient chronology may ever expect to be. Several of them ruled also in Babylonia.



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